

# BUSINESS WEEK

WEEK  
AGO

YEAR  
AGO

START  
OF WAR  
1939

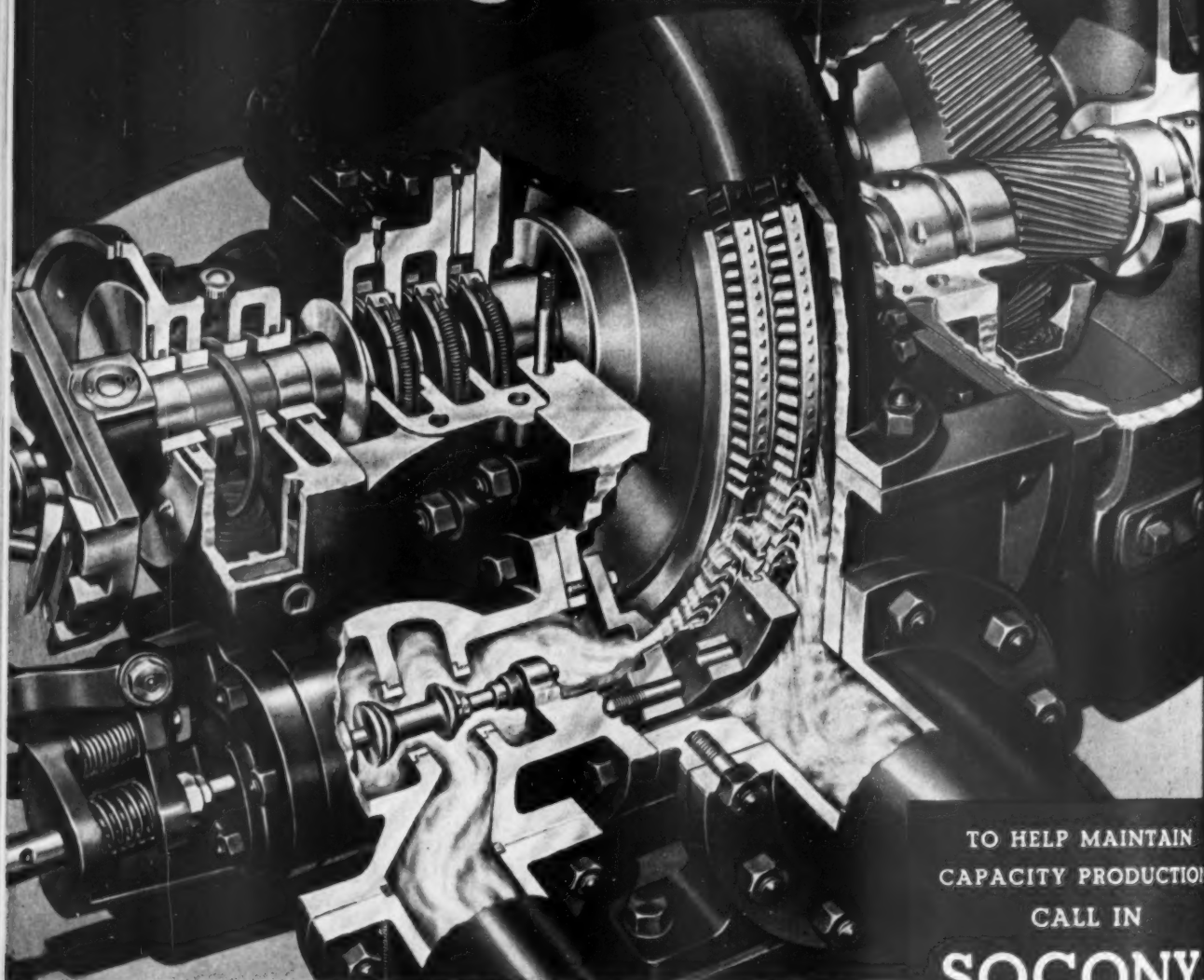


Gen. George C. Marshall: his job, global victory: the first step, planning the Anglo-American second-front push.

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# How to Harness a Sizzling Tornado!



*Lubricating oil and oil film are shown in red in the picture above.*

**D**ID YOU ever look inside a steam turbine before? This picture shows how the steam rushes in with tornadic fury—spins the turbine wheel—creates power through those precision-ground gears.

This sizzling steam makes things plenty hot. *And that's where oil comes in!*

You can see the oil at work. In a bearing, at the left. On the gears, at the right. The oil must conduct the heat away as well as prevent costly wear.

*It must provide unfailing lubrica-*

*tion, for if the turbine stops, vital war work may be halted!*

We were the first to make a turbine oil. And today over 50% of U.S.A.'s major-sized turbines run on Gargoyle Oil.

This is a major responsibility—part of our 77 years' experience, the world's greatest, in the field of lubrication.

SOCONY-VACUUM OIL CO., INC.—Standard Oil of N.Y. Div. • White Star Div. • Lubrite Div. • Chicago Div. • White Eagle Div. • Wadhams Div. • Magnolia Petroleum Co. • General Petroleum Corp. of Calif.

TO HELP MAINTAIN  
CAPACITY PRODUCTION!

CALL IN

**SOCONY  
VACUUM**



*for Correct  
Lubrication*



## How are you at magic?

**W**HAT we have to say here is of concern to practical, hard-working development and production men who are constantly facing operating problems and don't expect any magic to solve them.

To you we want to emphasize that the way to solve many of these problems is by the use of Hycar synthetic rubber. And here's why:

Hycar can be tailor-made for the job. Oil-swell can be positively controlled (even held to zero)—insuring dimensional stability of parts. Hycar is 20% to 25% lighter than many other synthetics and it stays light because it does not continually absorb oil or moisture. Hycar has an operating range of  $-65^{\circ}$  to  $250^{\circ}$  F. It resists abrasion 50% better than natural rubber. Its compression-set characteristics are outstanding.

These are the qualities that engineers and sales-minded business

men have sought for years for oil and fuel hose, hydraulic lines, motor mounts, vibration dampeners, gaskets, seals, packing and scores of other resilient parts. They are the qualities that will result in better, more care-free performance and lower maintenance cost in your operations. All our years of experience in synthetic rubber are at your service. *Hycar Chemical Company, Akron 8, Ohio.*

# Hycar

LARGEST PRIVATE PRODUCER OF BUTADIENE TYPE

## Synthetic Rubber

Because of Hycar's outstanding performance in war uses the demand far exceeds the supply. However, limited quantities are available for experimental work so that your supplier of rubber products may obtain small amounts to permit you to make tests in your own applications, both present and future. It's to your advantage to gain experience now against the day you will need new and even better resilient products. Our technical staff and laboratory are ready to help.



# RUBBER

## for Victory

At the time that Japan took Singapore, the impending shortage of rubber threatened a national disaster. Rubber products play a vital part in industry, transportation and even home life. Mechanical rubber products—hose, belting, packing and molded items—which Republic Rubber manufactures, serve in many fields. Petroleum, mining, manufacturing, lumber, railroads, utilities, ships—these and others demand transmission belts, conveyor belts, hose, and numerous other products made of rubber. To answer this threat to America's rubber supply, science developed synthetic rubber and the rubber industry continues to help march to victory.

Fortunately, Republic Rubber was prepared for this change to synthetics. In 1937, they placed on the market Reprene branded products made from synthetic materials, and with resistance to heat, oil, light and age. Therefore, Republic's entire organization from research engineers to Republic Distributors has had long experience with this quality line of Reprene Mechanical Rubber Products. Every day, hose, belting and other items are being furnished with Victory as their purpose.

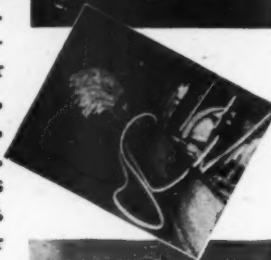
Republic Distributors—leading representatives of their field—form a closely associated, nationwide network of service and supply depots for mechanical rubber products. Call on your nearest Republic Distributor for prompt, capable attention to your requirements.



# REPUBLIC RUBBER

YOUNGSTOWN OHIO

HOSE • BELTING • MOLDED GOODS • PACKING • EXTRUDED PRODUCTS  
DIVISION OF  
**LEE RUBBER & TIRE CORPORATION**



## BUSINESS WEEK

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# WASHINGTON BULLETIN

## WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

### Industrial Demobilization Threatens to Become the Same Rough, Disorganized Process That Mobilization Was, and for the Same Reason—the Army's Heavy-Handed Methods. While Top Policy on Cancellation of Contracts, Evacuation of Plants, and Disposal of Surpluses Remains in the Hands of the War Relocation Authority, the Military Is Going Ahead on Its Own.

As things stand, the Army and Navy have complete control of contract cancellations—from the original policy decision straight through to the level of field operations.

Until this week, the Army did not even give WPB formal notice when it terminated a contract or shut down an operation. Now, under pressure from the production authorities and the War Relocation Authority, it has agreed to notify the operations vice-chairman and the WPB regional director when it orders a cutback which will reduce a plant's production schedules by 25% or more.

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### Army Might Hold On

If a major shakeup in the war program—perhaps anticipating a German collapse—should come within the next three or four months, the Army might direct the whole thing by default. Neither WPB nor Congress is ready to take charge now.

### Some Trouble Spots

WPB is particularly miffed at the way some of the recent contract cancellations have been handled. Small arms contractors have complained to it about cutbacks which, they say, left some plants high and dry after they had been assured of further orders.

WPB is also checking up on the way the Army pared its tank program. It expects to show that cutbacks left one big automotive manufacturer free to snap back into civilian business while competitors were stuck with just enough government work to tie up their shops.

Surplus disposal is another sore point. The Army Air Forces trod on some sensitive toes by issuing a catalog of surplus supplies for sale—441 items ranging from air compressors to thermos bottles.

In throwing such extra stocks on the market for direct sale, the Air Forces bypassed both WPB's Redistribution Division and Treasury's Procurement Division which theoretically handles sur-

plus disposal. This scared manufacturers and distributors who fear the Air Forces' sales are the forerunner of uncoordinated dumping by the services.

### WPB's Handicap

In standing up to the Army on these questions, WPB is badly handicapped by its internal troubles. The White House has not definitely assigned it any postwar role, either as an operating or as a policy-making agency. Hence Chairman Donald M. Nelson and Vice-Chairman Charles E. Wilson are working in the dark.

Until it gets clear-cut instructions from President Roosevelt, WPB can't do much except mark time.

While orders from the White House hang fire, Wilson is undertaking an overhaul of the WPB organization with the idea of equipping it to handle industrial demobilization and reconversion problems. In addition to his job as executive vice-chairman, he has just taken over the office of operations vice-chairman which has direct charge of the various industry divisions.

### Ceilings on Grains

The one big controversy which delayed announcement this week of OPA's integrated pricing program for grains was the question of how high the corn ceiling should be raised above its present level of \$1.07.

OPA wanted to set the new corn price between \$1.14 and \$1.16, but Capitol Hill and industry feed men wanted it set in the dollar-twenties.

Along with the revised corn ceiling, OPA was prepared to set ceilings on barley, oats, and sorghums, the other three major feed grains, and to supplement its soft wheat ceiling (BW—Nov. 13'43,p20) with a regulation covering hard wheat at parity. Hard wheat is used both for feed and for flour, and the ceiling has been designed to hold

Other Washington reports in this issue include: Coal Is Improving, page 14; Lines Drawn in Subsidy Fight, 15; Steel Is Easier, 16; UNRRA Gets Set, 18; Chemicals Output Disclosed, 22; Choice of Fuels, 38; Incentive Pay Cut, 82; Color Line Cited, 90; Costs Spotlighted, 94; Officers Liable, 98; Spent Yields, 102. Washington trends of importance to management are also discussed weekly in The Outlook and other regular departments of Business Week.

the price at parity so that the new flour subsidy will not be nullified by rises in the grain market.

Significance of the new program lies in OPA's recognition of the fact that prices serve to control grain distribution and that correlated ceilings must be imposed on all grains.

### Steel Workers State Case

With the formal announcement by Philip Murray's own steel workers' union that it is after a 17¢-an-hour wage boost, the Administration was put on notice this week that the C.I.O. means business.

There were no surprises in the announcement (BW—Nov. 27'43,p96), for the 17¢ demand figures out to only a fraction more than a 15% increase on the iron and steel industry's average wage of \$1.06 an hour.

Although the C.I.O. unions may surround their 15% request with demands for other concessions, it is significant that they are not proposing any circumventions, like John L. Lewis' portal-to-portal pay dodge, to get around the Little Steel formula.

They want a showdown on hourly wage limitations, and they are counting on genuine rank-and-file support—and the political considerations important in an election year—to help them win their way through.

### Renegotiating Commissions

Contract brokers who haven't heard from government renegotiation boards can be pretty sure that they weren't just overlooked in the shuffle.

Congress didn't bring commissions paid to contract brokers under renegotiation until last summer, but since then, price adjustment boards haven't lost any time moving in on the new field.

A special section of the Navy Procurement Division first surveyed the ground by sending questionnaires to all contractors who were going through renegotiation themselves. With this information as a starter, it is opening between 1,200 and 1,500 cases involving brokers' commissions. Some have been concluded already, but the majority are still in the early stages.

### Army, Navy Split the Job

The Army and Navy have agreed that the latter shall handle all cases involving renegotiation of brokers' commis-

# The Rubber Shortage is behind us but the Tire Shortage is still here!

Less than two years ago America faced as frightening a situation as any country at war ever faced.

Unless something was done, and done quickly, we would soon be without rubber.

And without rubber, no plane could fly, no tank could move, no ship could sail, no truck could roll, people could not get to work, materials could not move to and from plants.

That was the situation the Government and the rubber companies had to lick *inside of two years* if America was to stay in the war.

**Did the "impossible" really happen? Let's see what you think.** Right now, there is nearly enough rubber to meet our essential needs.

Today, this threat to American victory is merely an unpleasant memory, because Government, the Rubber Director, and a group of industries—rubber, petroleum, chemical, alcohol—working together, compressed into less than two years a job that would normally have taken a dozen years. But...

Because the public saw huge synthetic rubber plants shoot up almost over night, and heard that synthetic rubber was in large-scale production, they figured the tire headache was almost over.

**Now—a warning!** This is the situation today—the rubber supply crisis is past, but the long predicted and anticipated tire shortage is with us.

Why is this so, when thousands of tons of Government synthetic rubber are now being made?

Why is this so, when the rubber industry is turning out such a tremendous tonnage of rubber products and more airplane and truck tires than ever before?

Because, as the Baruch Committee foresaw, the fact that few tires could be made until we had our synthetic rubber supply well on the way resulted in millions of tires going out of service without replacement—and those remaining have less mileage in them. Inventories of prewar tires are gone.

Because our military needs are way beyond anyone's anticipations.

Because the rubber companies must use a lot of their manpower and machines to make bullet-sealing gas tanks and hundreds of other rubber products for war, in addition to tires.

Because half of today's requirements are for heavy-duty, large-size truck, bus, combat, artillery, and airplane tires, requiring many, many times the labor and materials of peacetime needs.

And finally...

Because the manpower shortage hangs over the tire industry as it does over all industry, and there are just too few hands for the job.

**Straight from the shoulder!** These prob-

lems will be licked when our enemies are licked. Meanwhile, we want to tell you frankly that unless you, and all American tire-owners, continue to make the preservation of tires a vital personal problem... our home-front transportation will break down and slow up the war production of America.

The way out is for you to conserve the tires you've got—stretch their life in every way you can.

## How to make tires last longer.

Do no unnecessary driving.

Live up to the government regulation—don't exceed 35 miles an hour.

Keep your tires inflated up to recommended pressure, and check them every week.

Avoid hitting holes in the road, or bruising your tires on curbs or stones. Don't start or stop suddenly. Slow down for sharp corners.

See that your wheels and axles are in line.

Switch your tires from wheel to wheel every five thousand miles, and have them inspected regularly for removal of foreign objects and repair of cuts.

And—most important of all—recap your tires as soon as they become smooth.

**Just how good are synthetic rubber tires?** Though not all civilians will be able to get synthetic rubber tires in the near future, you may be one of those who will. Therefore, you should know... and remember... these facts:

## FACTS ABOUT

### PASSENGER CAR TIRES

The synthetic rubber tire is not yet an improvement, but it will keep your car rolling through the emergency.

In many respects, the new synthetic rubber tires are an unknown quantity.

How they would behave at the phenomenally high speeds of prewar days is purely academic. The patriotic citizen knows that high speeds wear out his treads far faster than the recommended speed of 35 miles per hour, and drives accordingly.

Underinflation, driving over rough roads, and other abuses are bad for all tires—but today's evidence is that synthetic tires will stand less of these abuses than the tires you have been used to.

But, since these tires will be rationed to you in trust for the nation, it will be your duty to take every possible care of them, and to prevent misuse and abuse.

As we gain more experience with synthetic rubber tires, more and more things will become known about them, and the public will be kept informed.

If you use synthetic rubber tubes, be sure they are properly installed. They should be put into the tire, then inflated, deflated, and inflated again. And they should never be mounted on rusty rims.

## FACTS ABOUT TRUCK AND BUS TIRES

On trucks and bus tires, particularly over-the-road, inter-city service, the situation is less satisfactory.

Truck and bus tires are operated under more severe conditions than passenger tires. They are heavier, thicker—generate more heat. They are all too frequently overloaded, must travel on any kind of highway their work requires.

Again we'll be perfectly frank about synthetic truck and bus tires now built. They do not stand all the abuse that the prewar would take, especially overloading. Progress is being made every day—but overloading which damaged a prewar tire can ruin today's synthetic rubber tire.

The Tire Industry is bending every effort to solve the serious problems of furnishing satisfactory and sufficient tires to the truck and bus field.

But a serious threat still exists to our vital transportation.

So remember this—while the treads of passenger truck and bus tires are vitally important, the carcasses of these tires have a value to truck operators, and to the nation, that is beyond price. Unless these tires are made last and last and last, there is almost certain to be a breakdown of truck service.

Every one of these tires must be recapped every minute it needs it—before any damage done to the carcass. Speeds must be watched down, especially on hot roads. Overloads must be eliminated. Proper inflation is a necessity.

Operators, garage men, drivers, all have a heavy responsibility that they cannot avoid. These are straightforward statements of fact. The warning must not—cannot—be unheeded. A new tire warranty recognizes these conditions, but the real job is conservation!

**A new warranty—**With conditions as they are, and synthetic rubber in its present state of development, a new tire warranty has become necessary and has been adopted. It applies to all tires. Under its terms, injuries such as bruises, body breaks, cuts, snags, and heat failures, as well as tread wear, are not subject to adjustment consideration.

Nor are injuries or failures which result from improper tire care or misuse or abuse. This includes failure as a result of excessive speed, improper inflation, or other non-defective conditions. Or when tires are used on rims not conforming to Tire and Rim Association Standards.

**Remember—**the tire industry, the Rubber Director, everyone is working together with all their energy, as they have from the outset, to keep America's wheels turning.

Do your part—take care of the tires you got now!

## THE RUBBER MANUFACTURERS ASSOCIATION, INC.

This message is of such vital importance to the maintenance of all automotive transportation that we believe it should be given as much circulation as possible. With the permission of the Rubber Manufacturers Association, Inc., it is reprinted here for your attention, ETHYL CORPORATION, maker of Ethyl fluid, Chrysler Building, New York City.



This agreement is in line with a policy of assigning all cases in a particular industry or field to the same negotiation unit. Under the old system, a company was assigned to the office that had the largest dollar volume of contracts with it. In 1943 assignments, the boards will try to divide cases along industrial lines as much as possible.

This principle won't be iron-bound, and renegotiation authorities plan to follow it as much as possible and use the dollar volume yardstick only for problem cases. The Army Air Forces, for instance, will handle most of the contracts for planes, including those written by the Navy. Army Ordnance will take contracts for Navy rifles under wing. The Navy will do all the renegotiating on contracts for ships and purchase of petroleum products.

## Lumber Control Needed

Talk in WPB about making lumber a controlled material like aluminum, copper, and steel is misleading.

It's true enough that lumber is scarce and getting scarcer (BW—Aug. 14 '43, p. 9), that the number of woodsmen has been cut one-fourth, that some kind of rationing more effective than that achieved by present priorities will have to be evolved.

But to put lumber under a Controlled Materials Plan would be practically impossible. Its production isn't concentrated like the metals, and its distribution outlets are far more complex.

So, while WPB wishes it could slap CMP on lumber, it doesn't know how to do it.

This week it looked as if the system applied by L-218 to Douglas fir in the northwest, and by L-290 to western pine, could be extended to other species. These orders freeze lumber stocks of saw mills and oblige them to make shipments preferentially to the military services, military contractors, or on special WPB allotments as anticipated (BW—Nov. 6 '43, p. 8).

## OPA Tightens Up Enforcement

Manufacturers and wholesalers can expect more attention from Office of Price Administration enforcement officials in the future.

By economizing on personnel elsewhere, OPA is adding 800 new members, which will bring its enforcement staff up to 3,000.

Prodded by the complaints of retailers that they have been on the spot in the enforcement drive—paying for price

and rationing violations which originated further up the line—OPA plans to let the 800 new inspectors work out on manufacturers and wholesalers.

## Margarine Fights On

Latest strategy of the promargarine group in Congress is to tack the so-called Maybank bill as a rider onto the Senate version of the tax bill.

The measure, sponsored by Democratic Sen. Burnet R. Maybank of South Carolina, would repeal the federal tax and license fee on the sale of margarine for the duration and six months. In this way, the margarine group hopes to get around the House Agriculture Committee decision not to consider margarine legislation for the remainder of this Congress (BW—Nov. 13 '43, p. 98).

As a tax matter, the rider would come before the Senate Finance Committee where margarine has some powerful friends. If it is tacked onto the bill, margarine men expect to get the approval of the Senate and later of the House-Senate tax bill conference committee, where House members will be drawn from the Ways & Means Committee rather than the antimargarine Agriculture Committee.

## Vitamin Men Take Initiative

Rebuffed by the District of Columbia federal court, 13 vitamin product manufacturers will appeal to the circuit court for an order to restrain OPA from forcing a 15% cut in the prices of all vitamin products at all levels of distribution (BW—Sep. 18 '43, p. 92).

By going to the federal courts before OPA's regulation is issued, the vitamin makers sought to get around the necessity of taking their case before the Emergency Court of Appeals which was established by the wartime price control law, and which the vitamin makers feel is very much pro-OPA.

Basis of the manufacturers' appeal is the contention that vitamin prices have not risen or threatened to rise and, therefore, that the price control law does not give OPA the right to issue a regulation which manufacturers describe as being aimed at profits control.

## Profit Yardstick for Subsidies

Another government action keyed to profits is a directive from Economic Stabilization Director Fred M. Vinson to the Commodity Credit Corp. outlining the standards on which payments will be made to canners who have granted wage increases to their workers in accord-

ance with the National War Labor Board award.

Under Vinson's directive, CCC subsidy funds will be paid only to canners whose applications show that over-all profits on sales before taxes are 4% or less, or that their profit on net worth prior to taxes is 6% or less.

Even when such a showing is made, CCC will make payments to cover only that portion of the canner's short profit position that can be attributed to the NWLB-approved wage increases paid for the packing of four major vegetables—peas, tomatoes, corn, and beans.

## Small Business Row

Morris Llewellyn Cooke, a versatile New Deal braintruster and technician, seems to have the inside track for the job as chairman of the Smaller War Plants Corp. Cooke, who currently represents the public interest on the committee appointed by the President to thrash out portal-to-portal pay claims, has been sent in to clean up many a trouble spot in the past decade.

SWPC has been rudderless since Robert W. Johnson quit Oct. 1.

Appointment of his successor has bred a tussle between the small business committees of the House and Senate. Sen. James E. Murray is plugging for Cooke, in a play designed to put in his son, James E. Murray, Jr., as executive director of the corporation. Rep. Wright Patman is boosting J. A. R. Moseley of Texarkana, his former law partner, for the chairmanship. Moseley is now on the board of SWPC.

## Russian Lend-Lease

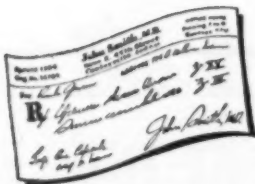
From the bush-beating around Canol (page 20) has come an obscure example of Soviet Russia's cooperation in the project destined to speed the movement of planes to its war front.

When engineers on Canada's arctic oil project were faced with the unbelievable and unfamiliar conditions of the area, the Russians delivered a library of technical books, the product of long experience in developing the Soviet Far North. Translated into English, these volumes are now at the elbow of each Canol technician, and Russian words with no equivalent in English sprinkle the local technical jargon.

## Cartels to Stop Cartels

Some of the President's right-wing advisers are hinting that one way to protect domestic industry from postwar raw





## Let us prescribe for your "sick" heating system

Here's a remedy for many poorly heated commercial, industrial and institutional buildings... A good way to correct waste of valuable rationed fuel... A good way to assure even room temperature throughout your building.

Convert your obsolete steam heating system into an economical and controllable Webster System... One that assures balanced distribution of steam to every radiator—regardless of distance from the boiler.

With the Webster Moderator System of Steam Heating, there is no waste of rationed fuel through overheating. Webster "Control-by-the-Weather" automatically changes the heating rate to agree with changes in outdoor temperatures.

### More heat with Less Fuel

Webster Engineers surveyed thousands of buildings to give owners an accurate estimate of the extra heat per unit of fuel to be achieved with the Webster Heating Modernization Program. They found that seven out of ten large buildings (many less than ten years old) can get up to 33 per cent more heat from the fuel consumed.

Let us show you how to obtain more heat from your rationed fuel. Write for "Performance Facts". This free booklet contains case studies of 268 modern steam heating installations in medium to large size buildings.



Outdoor Thermostat



Manual Variator

In the Webster Moderator System of Steam Heating there are just four control elements—an Outdoor Thermostat, a Main Steam Control Valve, a manual Variator and a pressure control Cabinet. These controls are an integral part of the Webster System... assuring the highest expression of comfort and economy in modern steam heating.

WARREN WEBSTER & CO., Camden, N. J.  
Pioneers of the Vacuum System of Steam Heating  
Representatives in principal cities : Est. 1888



Making Boosters for  
U.S. Army Ordnance

# Webster

Steam Heating

## WASHINGTON BULLETIN (Continued)

material cartels may be to relax the anti-trust laws.

Object would be to permit the formation of buying pools that could stand up to foreign combines and slug it out.

Back in the middle 'twenties, when the international rubber cartel was putting on a squeeze, an American rubber buying pool was set up with the acquiescence of the Dept. of Justice. It held prices down to a stable level until cartel restrictions were removed.

### Hands Off the Movies

The Dept. of Justice is on a hot spot.

Three years ago Thurman Arnold, then assistant attorney general, accepted, under White House pressure, a consent decree whereby the government would suspend action seeking dissolution or divorcement of the large motion picture theater chains from their producer-owners, provided the producers would not engage in any general program of expansion during this period. This "truce" has just expired, and the hands of Attorney General Francis Biddle's department are no longer tied.

However, politically minded observers predict that, unless Congress gets curious, the Dept. of Justice won't bring the case up again.

They point out that recently, when the jobs of Wendell Berge of the Criminal Division and Tom Clark of the Antitrust Division were switched, the movie case was permitted to remain in Clark's hands. Clark is a young, naturally ambitious Texan, who prefers to keep friends rather than make enemies.

### Worry Over Contract Forms

War contractors are keeping a wary eye on the Army's new standard procurement forms, which went into use Dec. 1.

Form No. 2—the one manufacturers are supposed to use in filing a bid for government orders—contains space for an elaborate presentation of cost data, with detailed breakdowns of items that some manufacturers find it easier to leave unspecific—for example, selling expense and overhead.

Small contractors protest that only a big company working almost exclusively on government business can keep an office force and accounting staff large enough to work up all the information every time a bid is filed.

The Army thinks, however, that contractors will like the new system as soon as they get the feel of it. Contracting officers will have authority to specify how much of Form 2 the manufacturer

must fill out, and if the actual practice works out according to present plans the full cost data will be required only in exceptional cases.

The idea is that giving the office more discretion will cut down the amount of paper work.

### Who's to Buy Abroad?

Buying of foreign agricultural products is still being done by the Commodity Credit Corp. in spite of President Roosevelt's October order that all procurement (except Caribbean sugar and Canadian food) be transferred to the Office of Foreign Economic Administration, with directive power continuing to reside in the War Food Administration.

Reason is that OFEA officials claim they have neither the organization nor the cash to take over the business.

CCC inventories of foreign commodities total more than \$225,000,000, in addition to an equal sum in the form of commitments for future deliveries.

Under the transfer order, OFEA would pay CCC for its stocks in foreign countries. Inventories now in the U. S. and future supplies imported by OFEA would be stockpiled or allocated to the trade by CCC, as directed by WFA.

### Capital Gains (and Losses)

The milk situation has got to the point where resort to formal rationing will be necessary in some regions.

Selective Service's hints that 1942 draft levies would be mainly replacements may have been meant to be comforting, but they got a new and ominous twist as the casualty figure of 3,772 from the Gilbert atolls battle was released. Losses of that magnitude are unprecedented and may not occur again, but they serve to remind SS registrants and their employers who have been watching Europe that "replacement" is a term applying to a two-front war.

Some Washington officials, fearing so much of our textile capacity might be diverted to foreign relief and rehabilitation that U. S. consumers would suffer, are trying to jog England into early conversion of its textile industry, now operating at about 30% of prewar level.

War Food Administration may recommend that WPB turn to rye to supplement alcohol production. This year's harvest was only 33,000,000 bushels, but last year's carryover of 42,000,000 bushels makes a total that is the second largest since 1922.

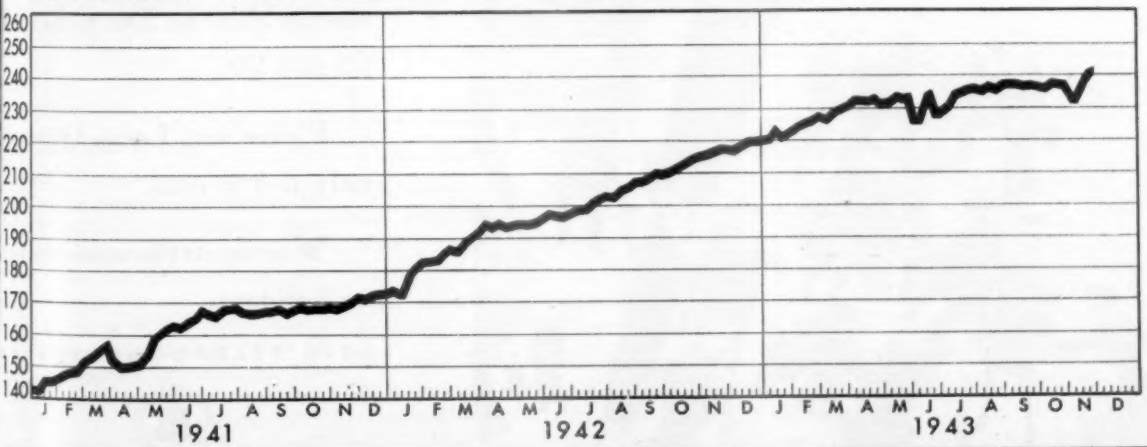
—Business Week  
Washington Bureau

# FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
INDEX (see chart below)	*242.2	†241.3	238.1	234.5	218.7
<b>PRODUCTION</b>					
Ingot Operations (% of capacity)	99.5	99.1	100.0	98.4	98.3
Production of Automobiles and Trucks	17,875	18,440	19,135	16,775	14,345
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$9,592	\$9,256	\$8,296	\$12,845	\$25,015
Electric Power Output (million kilowatt-hours)	4,403	4,513	4,453	3,990	3,766
Crude Oil (daily average, 1,000 bbls.)	4,414	4,414	4,383	3,970	3,878
Bituminous Coal (daily average, 1,000 tons)	2,117	1,910	1,888	1,936	1,954
<b>TRADE</b>					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	84	83	85	80	81
Other Carloadings (daily average, 1,000 cars)	63	58	65	61	58
Money in Circulation (Wednesday series, millions)	\$19,726	\$19,559	\$19,090	\$16,902	\$14,648
Department Store Sales (change from same week of preceding year)	+21%	+14%	+12%	+21%	+30%
Business Failures (Dun & Bradstreet, number)	43	29	49	64	107
<b>PRICES (Average for the week)</b>					
Commodity Index (Moody's, Dec. 31, 1931 = 100)	244.0	†244.6	246.6	245.7	230.9
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	160.3	160.5	160.9	159.8	154.9
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	213.7	213.8	214.9	207.9	186.7
Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
Strip Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.)	12.000¢	12.000¢	12.000¢	12.000¢	12.000¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.58	\$1.57	\$1.53	\$1.38	\$1.24
Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.74¢
Cotton (middling, ten designated markets, lb.)	19.34¢	†19.77¢	20.04¢	21.26¢	19.25¢
Wool Tops (New York, lb.)	\$1.278	†\$1.280	\$1.301	\$1.340	\$1.184
Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
<b>FINANCE</b>					
Stocks, Price Index (Standard & Poor's Corp.)	88.0	†89.6	94.5	96.2	74.0
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	3.83%	3.83%	3.81%	3.89%	4.28%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.73%	2.72%	2.69%	2.74%	2.81%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.33%	2.33%	2.31%	2.29%	2.36%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate)	1-1%	1-1%	1-1%	1-1%	1-1%
<b>BANKING (Millions of dollars)</b>					
Demand Deposits Adjusted, reporting member banks	33,201	32,649	31,817	31,185	30,224
Total Loans and Investments, reporting member banks	51,462	51,989	52,982	47,068	37,939
Commercial and Agricultural Loans, reporting member banks	6,423	6,435	6,424	5,707	6,494
Securities Loans, reporting member banks	2,288	2,294	2,728	1,662	800
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	37,377	37,857	38,327	34,093	24,581
Other Securities Held, reporting member banks	2,818	2,821	2,887	3,074	3,300
Access Reserves, all member banks (Wednesday series)	1,040	1,100	1,060	1,498	2,518
Total Federal Reserve Credit Outstanding (Wednesday series)	10,792	10,372	9,686	6,493	5,083

† Preliminary, week ended, November 27th. † Revised.  
 \* Index fixed by government. \$ Date for "Latest Week" on each series on request.

## BUSINESS WEEK INDEX OF BUSINESS ACTIVITY





## There's a Christmas rush on telephone wires, too

Help keep war-crowded  
circuits clear on December 24,  
25 and 26.

Please use Long Distance  
only if it is vital.

War needs the wires—even  
on holidays.

BELL TELEPHONE SYSTEM





# THE OUTLOOK

## Cutbacks Begin to Be Felt

Thirteen areas drop out of critical manpower class (this is temporary), and more materials are available; progress against Japs will speed process in long run.

In some sense, the conquest of the Marshall Islands last week overshadowed business even the vital meeting of the Four leaders. Less uncertainty now to surround the No. 1 question in the outlook, the timing of Germany's defeat, than the No. 2 question, logically, the pace of the demobilization which will follow.

At least, the general expectation of a move into Berlin more or less in mid-July has held up through many political and military uncertainties this year. But it will determine how fast we cut munitions later is how far and how long we shall have moved against Japan before Germany quits; and on that point had fewer clear-cut signs.

### Legacy of the Move

Specific offensives this winter were to be anticipated (BW-Oct.16'43,p13) in the light of the air, the ground, and especially the sea strength we've been building in the Pacific even while placing primary emphasis on Germany.

Progress through the jungles of the Philippines and New Guinea necessarily slow. The central Pacific route, on which the Gilberts are the first step, is expected to be swifter for reasons of terrain alone. But the heavy casualties at Iwa indicate the need for much more air and sea softening of the more heavily defended Marshalls and Carolines beyond.

In any case, it seems clear that the pace of our efforts against Japan will be even over the next few months from three major bases—in India, Australia, and Hawaii. On how quick and the rewards turn out to be will depend whether we cut back munitions 15%, 30%, 50%, or more if Germany falls.

### More Materials Freed

Meanwhile, munitions cutbacks continue to hold a prominent place in the immediate outlook. Additional ones are to be light this week and, with them, the new moves to utilize released materials.

The War Dept. revised procurement plans to assure advance notice to WPB of all contract terminations; this will help WPB in siphoning stocks and shipments of released materials to other military or civilian use. WPB soon will

modify the rigid priority requirements for civilian industry use of "leftover" materials.

In a few months, WPB likely will relax limitations on use of materials—such as the M-126 ban on steel in 400 products—as new output of materials becomes easier (page 16). All this means some reconversion—but not on a large scale for a good many months (BW-Nov.27'43,p13).

Of more basic importance, of course, is the manpower situation. First major hint of a letup was the War Manpower Commission's announcement that the number of areas classified as critically short decreased from 77 to 69 in November.

Thirteen areas dropped out of the Class I group—Orlando and Tampa, Fla.; Price, Ogden, and Salt Lake City,

Utah; Allentown, Pa.; Wilmington, Del.; Savannah, Ga.; Burlington, Iowa; Texarkana, Tex.-Ark.; Rock Springs, Wyo.; Wallace-Kellogg, Idaho; Butte, Mont.—whereas five other areas moved up into Class I—Cleveland; Clinton, Iowa; Knoxville, Tenn.; Richmond, Ind.

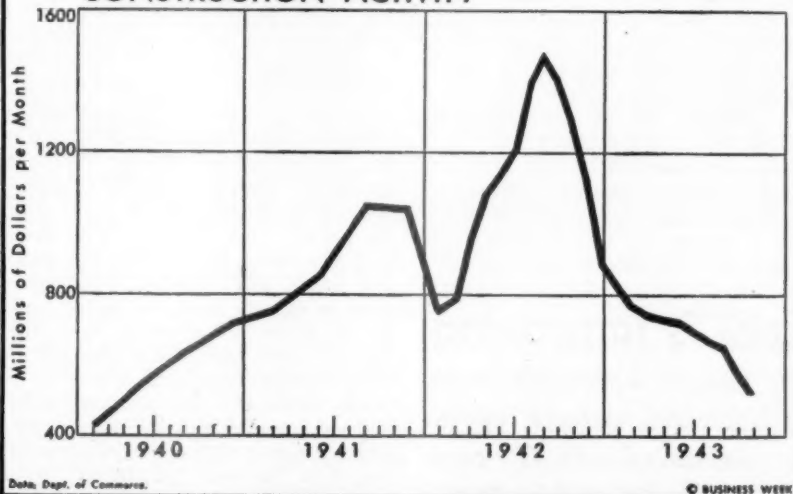
Actually, the population of the new shortage spots exceeds that of the easier areas by 200,000. So, in the over-all, the labor market tightened again in November.

### Some Labor Needs Are Up

Nonetheless, the November change was, relatively, a letup. WMC assures that it was only temporary, due to a particular flurry of munitions cutbacks. WMC goes on to estimate that whereas only 150,000 workers at most are expected to be released by contract terminations in the next three months, a key group of industries needs fully 500,000 new workers in the next month and a half—such munitions lines as electronic devices (80,000), aircraft, shipbuilding, and such "indirect war" lines as coal (60,000), lumber (60,000), railroads, meat packing, laundries, etc.

The complex forces operating on the

IN THE OUTLOOK:  
CONSTRUCTION ACTIVITY



While the big drop in construction came in late 1942, the decline recently has accelerated as military and war plant projects have been completed. Labor and materials so released have been absorbed in munitions-making. Sustained by the residential, highway, and utility building still going on, and by a few new war projects, the curve should flatten out at about \$400,000,000 a month. That the downtrend to

that level will continue into early 1944 is clear from WPB's reaffirmation last week that restrictions on civilian building cannot yet be relaxed, due to shortages—of manpower in most areas, and of such materials as lumber. But it will be a slow and tough reconversion job to step construction up again to reabsorb munitions cutbacks once Germany is defeated. Hence WPB may make a start at it even before.



## MANUFACTURERS' CLINIC

Next week, in New York's Waldorf-Astoria Hotel, the National Assn. of Manufacturers will conduct its Second War Congress, a three-day conference dealing principally with industry's

current and postwar problems. One of the highlights of the sessions will be a panel Dec. 8 on Jobs in Peacetime, with H. L. Derby (center), president of American Cyanamid & Chemical Corp., the moderator. The speakers: William Green (left), A.F.L. chief;

Frederick C. Crawford (second N.A.M. president and Thomas Products head; Paul G. Hoffman (third from left), chairman of the Committee for Economic Development; president of the Studebaker Corp. and Philip Murray, C.I.O. head.

labor market present a problem in precise formulation.

In the first place, there has always been spottiness in the war program—particular situations easing while others tighten. As we approach a turn in the over-all, or even a ceiling, easy spots are bound to increase, relatively. But nevertheless, unemployment is apt to be rare, temporary, and confined to a few "islands."

In the aggregate there won't even be a diminution in strictly war demand for manpower—munitions industries and the armed forces. Despite cancellations, cutbacks in unrealistic schedules, and improvement in utilization of labor, total needs of war industries for workers will continue to increase for some months along with output.

On top of that, the armed forces are still making heavy inroads. Contrary to expectations, the January draft quota will be fully up to December's 300,000; a drop in February is now unlikely.

## Coal Is Improving

Longer work-week noses up bituminous tonnage; operators dissatisfied with 17¢ price rise, but they're marking time.

On the coal front this week attention shifted from wages to prices and supply. As Economic Stabilization Director Fred Vinson authorized OPA to increase bituminous prices 17¢ a ton to compensate for increased labor costs resulting from the new wage agreement, Solid Fuels Administrator Harold L. Ickes announced that bituminous production in the week of Nov. 20 had risen to 12,700,000 tons under the lengthened hours of the new wage agree-

ment. Problems remain in both prices and supply.

• **Waiting for Breakdown**—Mine operators aren't happy over the size of the price increase, but they are appraising OPA's breakdown of prices by districts before committing themselves to any action. OPA combined with the provision for higher labor costs a system of profit margin control that limits the price advance.

Industry experts claimed that if the longer hours of work produced an 8% rise in output, prices ought to be lifted 30¢, and if output went up only 5%, prices should be advanced 40¢. At the very least, operators fear that OPA's 17¢ boost will force many high-cost mines to operate at a loss.

• **Future Steps Studied**—Operators are weighing alternative courses in the event that this proves to be true: (1) leaving mines in government hands until after the war and then filing claims for damages; (2) taking back all but the high-cost mines, and allowing the government to operate them; (3) taking back all the mines but shutting down the high-cost ones until OPA changes its mind or grants some kind of relief.

The 12,700,000 tons produced in the first week under the new wage agreement compares with a previous rate of output a bit over 12,000,000 tons weekly, confirming expectations that the presumed 14% jump in time worked, from seven to eight hours a day, would mean only a 5% or 6% increase in actual tonnage.

• **Strikes Cut Deep**—It will be over three months before even that increase makes up for the coal lost during the October strikes—prior to which the bituminous situation was tight (BW-Oct. 23 '43, p. 16). Hence Ickes' warning: "It will be necessary to maintain emergency control of distribution of coal by the Solid Fuels Administration."

This winter there will continue to be some pinches in those bituminous grades needed for railroad fuel and byproduct coke for steel. But the shortages will be for home heating the Pacific Northwest, due to the especially tight manpower situation in eastern mines, and in the northeastern states, due to attempts to make up bituminous for the lack of adequate supplies of anthracite, the primary coal in that area.

• **Anthracite Is Worse**—Hard which is a residential rather than industrial fuel, is far tighter than bituminous. The Solid Fuels Administration took over complete control of distribution of domestic sizes of anthracite in the northeastern area Nov. 18. A previous SFA regulation limited deliveries to retailers to 90% last year's. The new rules restrict consumers of more than twelve tons annually to a 30-day supply, and small consumers to a two-month stockpile providing for signed statements, orders, etc., as to current stocks and annual requirements.

Thus anthracite users may not be much better off this winter than fuel consumers, whom the Petroleum Administration for War expects to supply with at least last year's rations, amounting to 75% of a normal year's consumption; and PAW is confident that improved transport will make for smoother distribution this year than last.

• **Some Homes Cold**—Here and there other areas, home heating may suffer a bit from some lack of bituminous, as the Great Lakes region, or from shortage of wood, which is general, particularly marked in the South and the Far West.

Industrial consumers, on the whole, can expect to get by the winter, whether it's bituminous, fuel oil, or natural gas that chiefly provides the fuel.

# Lines Drawn in Subsidy Fight

As Senate prepares to act, Administration knows its only hope of beating farm demand for higher prices and gaining time in inflation fight lies in veto that Congress can't override.

Originally intended to please everyone, the Administration's program for raising farm prices up while holding the cost of living down by the use of subsidies now doesn't please anyone very much—and has some people going mad. As a result, the House of Representatives has already voted 278-117 to discontinue subsidies. The Administration is preparing to follow the House. The move to smother subsidies comes out of the congressional vote to continue the life of the Commodity Credit Corporation beyond the first of the year. CCC administers the bulk of the objectionable food subsidies, but Congress also wants to use the CCC bill as a vehicle for banning subsidies handled by other agencies—notably the meat and butter rollback programs financed by Reconstruction Finance Corp.

**Farmers Want Price Boosts**—The farm bloc considers subsidies a poor substitute for higher retail prices, fearing that when they are removed at the end of the war, farm prices would slump precipitately. Farmers (as represented by their organized spokesmen) would prefer "the real thing"—higher retail prices. More important than their arguments, however, is the psychology behind them. Farmers resent what they consider Administration "coddling" of organized labor. They feel President Roosevelt has tried to saddle them with the blame for inflation—and they don't like it. They think that city workers, for which the unionist is the farmer's natural enemy, are well able to pay higher food prices and don't see why they shouldn't. The farmers' ire is directed entirely at consumer subsidies—those designed primarily to protect consumers from rising prices—not at producer subsidies, included primarily as an inducement to production that might otherwise not be forthcoming. Any subsidy ban Congress passes will exempt the more important producer subsidies.

**Labor Blames Administration**—Organized labor is impatient at the Administration's inability to deliver on its rollback-subsidy promise. When the President came through with his hold-line order last April, the unions were assured that the differential between wage rates and cost of living would be eliminated by a subsidized rollback of food prices. Yet every month makes that promise look more tarnished; and growing disillusionment, the unions are now devoting their principal effort to getting wage boosts.

The Administration did offer labor an

immediate earnest of its good intentions, but it had barely launched the first of its big consumer subsidy programs—on meat and butter—when Congress stepped in. In order to get permission to continue the meat and butter rollbacks and to use subsidy money to hold agricultural prices at existing levels, the Administration had to promise that it

would institute no new rollbacks (BW—Jul.17'43,p15).

**• Ammunition in Living Costs**—The cost of living is now 5% above Sept. 15, 1942 (the President's line). It is 7% above May, 1942, base date for wage stabilization under the Little Steel formula. In the current agitation for higher wages, labor finds a big talking point in this discrepancy, plus the "hidden inflation" of black market prices which aren't reflected in the cost-of-living index. Abolition of present subsidies would widen the gap between wages and prices to an estimated 10%, speed labor's drive to new high wage levels.

OPA considers subsidies "the essential



## "LONDON..CAIRO..TEHERAN"

As the whole world watched Teheran—after watching, first London, then Cairo—the one early certainty about the big secret that Washington has been charged with keeping since Armistice Day was that it had not been well kept. While correspondents wryly eyed the censorship ban on reporting movements of the President, headlines echoed foreign reports that Roosevelt and Churchill were conferring in London, that they had met with Chiang Kai-shek in Cairo, that all three had descended on Stalin at Teheran. The press, hewing to the line of the censorship, felt its responsibility for forewarning readers of the significance of such meetings (BW—Nov.20'43,p15; Nov.27'43,p7). Reuter

finally gave the Office of War Information another grudge against the gun-jumping practices of British news services by putting its imprimatur on flat statements that the historic sessions were in progress. From behind the scenes floated sharp speculation that the reported sequence of the conferences meant that the President, Prime Minister, and Generalissimo had felt the necessity of preparing a united front on which to stand when they bargained with the Marshal. But only the most hopeful felt that the finale would see the Big Fourth joined with the Big Three not only on invasion plans, postwar boundaries for Europe, and the application of "unconditional surrender" to Germany, but in immediate action on their second front—against Japan.





Up to its neck in a battle with the farm bloc over subsidies, OPA this week brought in H. H. Williamson, former Texas Agricultural Extension Service chief and Brazos County livestock farmer, as adviser on agricultural relations to mend its fences. The Dept. of Agriculture and farm bloc congressmen have high regard for Williamson's competence, and his nonalliance with major farm organizations makes him acceptable to OPA. But the consensus is that—no matter what Williamson's efforts—OPA's agricultural relations are beyond repair.

ingredient of the hold-the-line order." The line is essential to OPA's present method of operation, not so much because it provides a limit beyond which (presumably) prices should not be allowed to go, but because the intricate legal and administrative mechanism of applying the line as a yardstick to all proposed price increases makes it an important device for slowing down inflation.

• **The Same Pattern?**—Increasingly, it is beginning to look as though the Administration may win a temporary victory on subsidies—much as it did last summer when Congress, following Roosevelt's veto of an antisubsidy CCC bill, finally extended the agency's life and gave it limited permission to continue subsidies for six months. Now, as then, the real maneuvering is expected to come after a veto. It now looks as though Congress may fail to override a veto, as it did before, allow another six months of subsidizing.

Several straws in the wind indicate a possible congressional softening on subsidies:

Sen. Robert A. Taft of Ohio (representing the conservative, anti-inflation

Republicans) is again talking compromise, as he did last summer.

The death of Rep. Henry B. Steagall of Alabama puts Rep. Brent Spence of Kentucky, a prosubsidy man, in as chairman of the House Banking & Currency Committee, which has jurisdiction over the CCC bill. The presence of a prosubsidy legislator in an important procedural position might effect a last-minute House-Senate compromise.

• **Popular Support Develops**—Congressmen's mail is beginning to reflect considerable popular support for subsidies—and apparently not all of it is union-inspired. Above all, time is getting short. The CCC will die Dec. 31 unless Congress acts, and Congress will be wanting to get home for the Christmas holidays.

Thus, there seems to be at least a 50-50 chance that subsidies will continue for a few more months. The immediate effect that subsidies, or the lack of them, may have on the cost-of-living index is less important in the long-term fight against inflation than the fact that subsidies have become symbolic of the Administration's drive to maintain wage-price stabilization. The Administration itself admits that if subsidies are abandoned, the line will be broken.

• **Even a Breather Helps**—While the most the Administration can hope for as an outcome to the subsidy fight is to gain a little more time in its struggle against inflation, its thinking now is that even a little time might be enough. There is talk of an early end to the war in Europe, of even measurable unemployment fairly soon, of huge governmental surpluses to be dumped on the market (page 13), developments that are counted on to exercise a deflationary effect which will be sufficiently strong to ease the pressure for price and wage boosts.

If subsidies are continued until the middle of next year, the President will be up against an even bigger fight—continuance of the life of the Emergency Price Control Act which expires next June 30. Expectation is that not only the subsidy ban but also a host of other measures, including those which would take fuel and food pricing away from OPA, will then be tied to renewal of the price control act. Weighted down by all this congressional buckshot, price control might become a dead dodo for all practical purposes.

What makes the outcome even more uncertain is the fact that the showdown is scheduled to come smack in the middle of the 1944 election campaign.

• **The Issue Is Now**—Pessimists see little prospect of avoiding serious inflation unless the Administration at least succeeds in halting the cost of living in its tracks or, to get a margin of safety, pushes it back from present levels.

## Steel Is Easier

Openhearth ingots, furnace pigs pile up, but finishing facilities are too tight to permit resumption of civilian output

Contrary to the knowing prediction of a few months ago, some openhearth steel furnaces were idle this week. Republic openhearth in the Yorktown district were down for lack of orders, and there was a rumor that Carnegie-Illinois' Pencoyd plant at Philadelphia would close within a month.

• **Alloys Stopped**—Republic's furnaces were down because they had been producing alloy steel until recently, now could not replace such business with orders for carbon steel that would be processed into the proper finished steel products.

Carnegie-Illinois, which had been supplying raw steel for lend-lease, Pencoyd, is faced with closing the plant because it is too high-cost and the



## FSA TO FEA TO CIO

No. 2 man with C.I.O. "to mobilize labor's forces for political action on national scale" before next April primaries is Calvin Benham Baldwin (above). Last spring Congress' ire at the Farm Security Administration, which Baldwin was director, cost him his job. Recently he was all set to sail to Italy as one of the export New Dealers whom Leo Crowley, Foreign Economic Administration, could use. Now he'll work for C.I.O. Political Action Committee as assistant to Sidney Hillman.

point in operating it as long as  
 ingots are available.

**Easier Situation Implied**—These de-  
 cisions imply an easier steel situa-  
 tion, except for flat-rolled products  
 which continue to be tight.

The easing comes as a belated exon-  
 eration of the steel industry for its  
 opposition to government pres-  
 sure to expand capacity to 120,000,000  
 tons, regarded by some government  
 economists as essential to sustain the  
 war effort during the war.

**Next Year**—This year only 89-  
 million tons of steel will be produced,  
 the way things look now, less will  
 be needed next year. Yet the steel in-  
 dustry is on the last lap of a steel ex-  
 pansion program that will carry its total  
 capacity to 97,000,000 tons.

Already it has become obvious that  
 the new electric furnaces will not be  
 needed after the war, unless they are  
 sold over to industry at a price that  
 would permit the shutting down of  
 the furnaces to operate the new ones.

**Too Many Pigs**—But even open-  
 hearth furnaces are now in excess with ingots  
 piling up at various places. More-  
 over, blast furnaces are turning out  
 more pig iron than can be consumed.  
 It was reported last week that WPB was  
 ready to end allocation of iron as an in-  
 dicator of its easier position. But some  
 observers believed that if foundries  
 could operate at peak capacity with ade-  
 quate manpower, iron consumption  
 would be stepped up adequately.

**Finishing Bottleneck**—Idle steel facili-  
 ties offer little hope for resumed civilian  
 production of such household goods as  
 refrigerators, washing machines, and  
 vacuum cleaners. The Office of Civilian  
 Requirements has a bit more steel, but  
 there are still steel ingots piling up  
 which OCR cannot use because of the  
 bottlenecks in finishing facilities, par-  
 ticularly sheet and strip.

Even if OCR were able to get some  
 of this idle steel in the proper form to  
 make refrigerators, for example, it would  
 not get into the motor bottleneck—the  
 tightness in electrical goods will not  
 be until the second quarter of 1944—  
 and into the castings bottleneck (maybe  
 seven-month condition). And even  
 after breaking both of these bottlenecks,  
 there would be little assurance that  
 OCR could secure the proper facilities  
 to make the refrigerators. Most re-  
 frigerator manufacturers are loaded up  
 with contracts for airplane parts and  
 other essential war equipment.

**Another Six Months**—Thus, while the  
 shutting down of ordnance plants here  
 and there has released manpower, it has  
 not helped break any of OCR's most  
 troublesome bottlenecks, thus far. And  
 continued large-scale production of mili-  
 tary vehicles, ships, airplanes, signal  
 equipment, and special ordnance items  
 seems to spell a further six-month wait  
 for new household items.



## BEACHED

Damaged in the South Pacific, 16  
 steel landing barges (above) are being  
 sold at \$1,650 each. The 50x20-ft.  
 boats are offered by California Pipe &  
 Machinery Co., Berkeley, which bid  
 them in. Before selling its \$27,000

barges, however, the Army ripped out  
 their 450-hp. diesel engines and instru-  
 ments. Purchasers thus far include  
 gravel companies in need of scows and  
 an asparagus grower who farms small  
 islands on the Sacramento River. He'll  
 use the ramp-equipped barge for inter-  
 island machinery transport.

## Tooling for Peace

General Motors clears the  
 decks for reconversion to civilian  
 work by placing orders now for  
 its postwar machine tools.

When Charles E. Wilson, president  
 of General Motors, urged a congress-  
 sional committee last week to authorize  
 production of machine tools for civilian  
 goods output, he had good reason be-  
 hind his plea. Capacity lies idle for  
 such work; materials are rapidly coming  
 to the stage of availability; a favorable  
 shift in the manpower situation would  
 supply the other needed ingredient.

• **Two Purposes**—For the past several  
 weeks, General Motors tooling experts  
 have been circulating among machine  
 tool manufacturers. One objective of  
 the discussions has been to outline for  
 the suppliers the program that the larg-  
 est car maker now contemplates for re-  
 conversion. The other has been to find  
 out just how much capacity exists for  
 orders today.

General Motors can do this because  
 it has completed the great bulk of its  
 war tooling program. Placing of orders  
 for new tools is diminishing in all divi-  
 sions. As a result, the experts handling  
 such work are now finding time to think  
 about postwar planning.

• **Capacity Exists**—The net of G.M.'s  
 survey is that large-scale capacity exists

for production of machine tools, that  
 engineering for equipment can be  
 worked out, designs developed, and pre-  
 liminary work begun, but no actual tools  
 can be produced now because of re-  
 strictions on the use of essential mat-  
 erial for nonwar work.

Most of the machine tool makers are  
 approaching the bottom of their order  
 books (BW—Oct. 23 '43, p. 20). In fact,  
 many of them today have idle time  
 available in departments making parts  
 and components for their products.  
 Layoffs are not uncommon lately in  
 these shops.

• **Placing Orders**—General Motors has  
 begun to place firm orders for machine  
 tools, and now is in process of enlarging  
 those orders. Delivery specifications are  
 contingent on the relaxing of regula-  
 tions governing the use of raw materials.  
 Prices are not solidly set down. Gen-  
 erally they are being made subject to  
 negotiation.

With these orders in hand, machine  
 tool companies can proceed through the  
 planning and engineering stages and  
 hope that Wilson's plea will bring them  
 some steel and other metals now show-  
 ing up in somewhat greater supply.

• **Competitors Skeptical**—Some auto  
 companies take the position that orders  
 don't mean a thing without prices or  
 delivery dates attached. But General  
 Motors is gaining positions near the top  
 of many reconversion order books, an  
 advantage which can do no harm when  
 Washington flashes the go-ahead. At  
 least one smaller auto company has been

impressed enough so that it is following the example.

● **Big Reconversion Job**—On the basis of the volume placed thus far, the reconversion program will bulk far larger than did a normal year-to-year change in the auto industry.

Part of the explanation lies in the fact that the war has shuffled up machine tool inventories as has no previous event in history (BW—Feb. 21 '42, p15). Some machines were shipped abroad under lend-lease; their return is not expected. Others were sold to war goods producers. Still others were so thoroughly converted to war work that reversion would cost more than it's worth. Such factors combine to create yawning gaps.

## UNRRA Gets Set

Agency to provide relief in war-torn nations moves to its Washington headquarters, maps its major duties.

In the three weeks of its existence, the United Nations Relief & Rehabilitation Administration (BW—Nov. 20 '43, p112) has rolled up an impressive record.

● **Down to Work**—In Washington, on Nov. 9, the delegates of 44 allied and associated nations signed the formal agreement establishing UNRRA, moved the following day to Atlantic City with

some 500 additional experts to put UNRRA into working order.

Within three days, several dozen committees had been appointed, a temporary secretary elected, and a director general—Herbert H. Lehman—selected.

Within a week, committees and subcommittees were in session, preparing reports on the scope of UNRRA, on methods of financing its work, on displaced persons, on administrative costs, on ways of acquiring relief supplies.

● **Principal Divisions**—This week the UNRRA closed its Atlantic City workshop and moved to Washington where permanent headquarters will be established. It has defined its scope under four heads:

**Relief Supplies:** essential consumer goods to meet immediate needs, such as food, fuel, clothing, shelter, medical supplies.

**Relief Services:** health and welfare, assistance in caring for and maintaining records of displaced persons, and in securing their repatriation.

**Rehabilitation Supplies and Services:** materials (such as seeds, fertilizers, raw materials, fishing equipment, machinery and spare parts) needed to enable a recipient country to produce and transport relief supplies for its own and other liberated territories.

**Rehabilitation of Public Utilities and Services:** repair or restoration to meet immediate needs, such as light, water, sanitation, power, transport, temporary storage, communications, and assistance in procuring material equipment for the rehabilitation of educational institutions.

UNRRA will deal with the government in authority in liberated areas or, lacking such an authority, with the mili-

## FOR ITALY'S FARMS

First UNRRA feelers for farm equipment put the needs of Sicily and Italy at 2,000 tractors, proportionate quantities of spare parts, field, and hand implements. Under present arrangements, the bulk for these and other items will be submitted later to whatever government is established in Italy after the departure of the Allied Military Government (BW—Nov. 13 '43, p17).

Before the war, Italy was a buyer in the U. S., purchasing over \$250,000,000 worth of tractors and parts during the years 1936-40. Some of this equipment has turned up in good condition in Ethiopia, may be used in the Middle East (page 47).

At first blush, the American farm implement industry considers the UNRRA request unexpectedly high, wonders where materials or capacity to produce these machines will be found.

tary chiefs during the transition period.

● **The Initial Needs**—Preliminary estimates of material needs for the occupied countries have been received by UNRRA. Measured in the number of tons requiring shipping, this amounts to only 25,887,000 tons for the first months (BW—Nov. 20 '43, p38); a separate estimate for China indicates need for 3,200,000 tons of food in the first six months of liberation, a total of 12,000,000 tons of relief supplies during the first year (both figures will be set down); and estimates of displaced persons requiring aid run from between 20,000,000 and 30,000,000 in Europe, some 40,000,000 in China.

UNRRA's request for funds—estimated at \$2,500,000,000—is to be located among member nations at a rate of 1% of 1942-43 national income. Enemy and ex-enemy nations will be compelled ultimately to pay for relief supplies. The U. S. share is put at \$356,000,000—of which probably more than \$500,000,000 would be requested initially—and the British Commonwealth share roughly \$470,000,000.

● **Flexible Formula**—Member nations would supply only 10% in cash, providing the remainder of their shares in relief goods, except in the case of countries unable to supply goods. Where a 1% formula would be a hardship, smaller contribution is possible.

UNRRA has decided that uniform food standards might prove inequitable; will not provide a higher standard than prevail in any country, and will set down standards proportionately in advanced countries.

Member nations wishing to purchase



## DIRECT DELIVERY

At Marietta, Ga., Bell Aircraft's huge new bomber plant (BW—Mar. 20 '43, p17) is now nearing peak production with more than 8,000 workers. Indicative of its size are integral receiving

docks which accommodate whole freight trains inside the plant. Lawrence D. Bell, president, recently made headlines at nearby Atlanta by promising that this plant would become no postwar ghost, predicting that 20,000 might ultimately be employed.



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goods independent of UNRRA  
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the manner and timing of distribu-

**Cooperation Proposed**—UNRRA will  
submerge the Combined Boards  
 Anglo-American). Rather, it will work  
with them in order to avoid com  
for goods continuing in short  
and still needed for United Na  
war industry. These boards now  
the use of some 97% of non-  
shipping, an average of 95% of all  
Axis food and raw material sup-

Although starvation is rampant in In  
UNRRA ruled unfavorably on the  
most of the Indian delegate that relief  
be supplied immediately to Ben-  
India's claim was based on the fact  
the famine arose as a result of the  
time cutoff of rice imports from  
China.

Germany, and other enemy countries,  
be compelled—according to another  
UNRRA decision—to accept back into  
the homeland any "colonists" which  
UNRRA decides to deport from liber-  
ated areas. This applies particularly to  
colonists in Holland, Poland, and  
China, as well as Japanese colonists who  
later be uprooted from China and  
the southwest Pacific.

**Boards' Plan Secret**—As UNRRA  
moves into its new headquarters and  
begins the allocation of funds with  
which to purchase relief stockpiles, the  
Combined Boards will continue the ad-  
justment of secret estimates of relief  
needs as the military plans for next year  
become more predictable.

## Ready for a Boom

Leadville sees an era of  
prosperity in Ickes' approval of  
\$1,400,000 tunnel to drain its  
submerged metal mines.

Secretary of the Interior Harold L.  
Ickes has at last cleared all obstacles out  
the way of the proposed \$1,400,000  
tunnel to drain submerged mines in  
Colorado's two-mile high Leadville area,  
estimated by the U. S. Bureau of Mines  
to contain many thousands of tons of  
lead and zinc, and some copper, silver,  
and gold.

**Unanimously Approved**—The Interior  
cabinet appropriation bill, effective last  
September 1, contained the appropriation,  
which was unanimously recommended  
by all government agencies concerned,  
such as the Bureau of Mines, the WPB,  
and the Metals Reserve Co., because of  
the impending decline in lead and zinc sup-  
plies from the tristate district.

But for a while it was feared there  
might not be any tunnel. Ickes found



## THAW FOR STEEL

On the great iron docks of Wiscon-  
sin, Minnesota, and Michigan, Great  
Lakes shippers are making a final stand  
against wintry blasts which soon will  
lock the ports with ice until spring.  
Their current battle is against frozen  
iron ore which requires thawing be-  
fore it can be loaded on boats. This  
involves punching holes in the con-

gealed ore masses in cars and injecting  
locomotive steam by hose (above).  
Punchers (below) must then keep it  
from refreezing in loading pockets  
which chute the ore into cargo holds.  
Their hopes of meeting 1943's ore  
quota (BW—Oct.23'43,p34) now shat-  
tered, by weather and misfortune,  
shippers thus hope to squeeze through  
all possible tonnage before the Lakes  
finally freeze over early in December.



many flaws, chief among them being  
that there is no present provision to re-  
cover costs of the drainage from mine  
owners; the \$1,400,000 is an outright  
contribution from the government as it  
now stands.

● **In Competition**—Secondly, it looked  
as if there might be a tug of war for  
materials and men between this project  
and irrigation projects being rushed to  
completion by the Bureau of Reclama-  
tion, also under Ickes—such as the Grand  
Lake-Big Thompson tunnel through the  
Continental Divide 75 miles north,  
closed down at the time the Leadville  
tunnel was authorized, but recently re-  
sumed. Also, the supply of available

manpower and equipment was strained  
by construction of the Treasury tunnel  
125 miles west (BW—Aug.21'43,p39)  
also to produce lead and zinc.

Ickes got an easement from the U. S.  
District Court in Denver covering the  
tunnel route; and he ordered an area of  
eight square miles surrounding Lead-  
ville to be closed to further mineral-  
claim filings, to prevent land specula-  
tion. Further, he insisted on holding  
a public hearing in Leadville Nov. 20  
to fulfill requirements of the Colorado  
drainage-tunnel act.

● **Ickes Criticized**—For this and other de-  
lays, he was criticized at a Denver hear-  
ing of a Senate Public Lands subcom-

mittee headed by Sen. Patrick McCarran of Nevada, who said Congress never intended mine operators to reimburse the government.

Ickes' aides, however, pointed to an opinion by the Comptroller-General which said it was his duty to recover part of the cost if he can, and he is apparently still determined to try to do so. But the committee was promised there would be no more delay in construction.

• **Less Than Desired**—The tunnel won't be all Leadville originally desired; it is to be only 350 feet under the present deep drainage, the Yak tunnel, in place of the desired 700, and only 14,310 feet long in place of the desired five miles—though from its inner end, laterals aggregating 6,050 feet will finger out to drain three principal producing districts. The drainage will fall into the Arkansas River.

The tunnel will be seven by nine feet in cross-section. Estimated completion time, barring further manpower or equipment complications, will be not more than 18 months. The Bureau of Mines will supervise construction and operation.

• **Mills Are Prepared**—Leadville hasn't waited for its boom, however. Mills built or enlarged since the war demand for lead and zinc began—including the new 1,000-ton sink-and-float mill of Ore & Chemicals Co. (BW—May 8 '43, p30)—now have a total capacity of 2,600 tons of ore daily, most of it from old dumps containing lead and zinc.



Skyscraper purchases by two insurance firms dominate Chicago's brisk real estate news. Continental Casualty and affiliates are buying the 29-

## Straus Bldg. Sold

Chicago's biggest real estate deal in years sets tempo for upsurge in property transfers and rentals.

Symbolic of the surge in Chicago real estate was the recent transfer of the 29-story Straus Bldg. to the Continental Casualty and Continental Assurance companies, the largest property transaction in the Loop since Marshall Field & Co. bought the site of its present retail store from the Field estate in 1939.

• **Fast Pace**—Sales and rentals have reached a tempo that Chicago hasn't known in years. The Real Estate Research Corp. reports that the number of sales in October was 17% ahead of October, 1942, the dollar volume 34% higher; that the number of mortgage loans was almost 10% greater, dollar volume 45% greater.

The Continental Companies Bldg., as the Straus property at 310 S. Michigan Ave. is to be known, was built in 1924 at a cost of about \$15,000,000. Northwestern Mutual Life Insurance Co. sold it for \$5,350,000 to the Continental companies, which will occupy it when the leases on their present quarters expire in 1947.

• **Medinah Club Sold**—Less spectacular, but also pointing the trend, was the recent auction of the architecturally ex-



story Straus Bldg. (left) for home offices while Union Central Life will run the Medinah Club (right) as a combination hotel and club.

otic Medinah Club, built in 1929, Chicago home of the Mystic Shrine of North America. Into the Medinah's Celtic bar, Spanish swimming room, Empire dining room, Greek Egyptian ball room, and other elements of the architectural deco club poured some \$8,500,000. Under the hammer it brought \$352,500 by the Union Central Life Insurance Co., holder of the first mortgage, will operate the property as a combination hotel and club. Albert Pick Inc., manufacturer of hotel and restaurant equipment, offered \$122,500 for the furnishings (as compared with \$52,500 included for that purpose in Union Central's bid), but there was no offer for the building alone.

• **Office Space Filling**—The influence of federal agencies has been largely responsible for the increase in Loop building rentals. Vacant space in 10 of the 165 buildings in the area bounded by Lake Michigan, Roosevelt Rd., O St., and Ohio St. has dropped from 762,188 sq. ft. on May 1, 1942, to 3,439,639 sq. ft. last May 1, according to a survey by the National Association of Building Owners & Managers.

Many a white elephant finally is being off, although buildings constructed for rental at \$5 to \$6 a sq. ft. are now getting \$2 to \$2.50, according to the search firm.

• **What Investors Want**—As displaced from New York demand for high and middle-class apartment buildings (BW—Nov. 27 '43, p22), Chicago investment and speculation preference is to office buildings, farms, and warehouses (less service labor required).

Residential property is in sharp demand. The research organization reports such property has enjoyed 99% occupancy this year, and there is no sign of a letup.

## Canol a Scandal

Witnesses level long list of charges at Army's oil project in Canada; military men insist it is proving its worth.

When Truman committee investigators lay the lash on any war project, fur and facts begin to fly.

Target for today is the U. S. Army oil well, pipeline, and refinery project in Canada's Northwest Territory. A Truman committee spur in this case is Interior Secretary Harold L. Ickes, who has demanded immediate abandonment of the "impractical and wasteful" \$100,000,000 development.

• **The List of Charges**—The Truman committee witnesses testified:

(1) That the project was hastily approved

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THESE MEN KNOW SOMETHING ABOUT **SCRAP!**

If you struck up a conversation with a Chinese citizen in bomb-churned Chungking, and brought up the subject of America's metal-salvage drive, he might say something like this:

"As soon as the Jap bombers have gone and the all-clear signal sounds, we Chinese carefully gather the bomb-fragments and turn them in for scrap. For in China, every ounce of metal is precious.

"One way to keep *that* kind of scrap away from your cities is to turn in *every other kind!*"

The sooner every bit of scrap is turned in — be it unused door-keys or unused heavy machinery — the sooner we and freedom's fighting friends will live in peace and happiness once more. . . . There is still a lot of scrap uncollected. Let's get it in—quick—because "*Uncollected scrap means undefeated Axis!*"

*This is an advertisement of the Felt & Tarrant Manufacturing Company, 1733 North Paulina Street, Chicago 22, Illinois: makers of COMPTONER ADDING-CALCULATING MACHINES*



## A NEW G-E WATCH DOG\* FOR WAR PRODUCTION LIGHTING



For months G-E Watch Dog Starters have been providing economical and satisfactory protection for 40-watt fluorescent lamps in war factories all over the country. The general use of the FS-40 Watch Dog Starter for 40-watt lamps has resulted in efficient lighting service... reduction in maintenance... and complete elimination of annoying blinking and flickering of dead lamps.

Now G-E offers the same protection to 100-watt lamp users by introducing the FS-100 Watch Dog. It has the same outstanding qualities as featured in the popular FS-40. The new Watch Dog will do the same efficient job for 100-watt lamps as the FS-40 did for 40-watt lamps.

You can obtain additional information about G-E Fluorescent Accessories by requesting our new catalog. It's yours for the asking. Just write to Section G-1231-102, Appliance and Merchandise Dept., General Electric Company, Bridgeport, Conn.

\*Reg. U.S. Pat. Off.

**GENERAL ELECTRIC**

by the Army without adequate consultation. (Truman committee investigators hint, in fact, that they have private opinions of officers close to the project that it is a gold brick.)

(2) That experts of Imperial Oil (New Jersey Standard affiliate which opened the oil field) warned not only that the discovery was small but that advisability of a pipeline—550 miles across difficult mountains to Whitehorse—was extremely doubtful.

(3) That the project was scheduled to cost \$25,000,000 and to be completed in 1942; its ultimate cost now is put at \$135,000,000, and it won't be finished until next spring.

(4) That Canada and Imperial Oil get all the gravy. (Imperial gets all new wells and casings below ground without charge at the end of the war, and the Canadian government may purchase pipeline, refinery, and other above-ground structures.)

(5) That pipeline and refinery were constructed to handle 3,000 bbl. daily, and the project has surprised even its most ardent boosters by coming through with 20,000 (a major field).

(6) That, to get drilling equipment to the field, the Army had to build the Great Slave Lake-MacKenzie River waterway and portage route which it had previously rejected in favor of the Alaska Highway.

(7) That, to build the pipeline, the Army had to construct an accessory highway over terrain much tougher than that of the Alaska Highway itself.

(8) That, to get the refinery equipment to Whitehorse, the Army had to straighten the narrow-gauge railroad from Skagway.

(9) That Ickes, as petroleum administrator, objected violently to removal of even a small refinery from the U. S. high-octane gasoline program; that WPB opposed diversion of materials and manpower.

(10) That the crude oil won't flow

through the above-ground pipeline a vailing extremely low winter temperatures that the pipeline is likely to break changes in temperatures; that no pipeline has been made for feeding and crews at the pumping stations.

(11) That the Army failed to provide source of water for the steam needed to operate the refinery.

(12) That shipments of material water to Skagway have taken more time than the oil Canol will produce in a year.

● **Some Hindsight**—The Canol scheme as it may be known to history, at the first, and certainly will not be last, war project to be made to a ridiculous in the cold light of pre-war and post-peace second judgment Washington investigators.

When the Canol project was conceived by the Army, the Japanese sweeping down on the last Allied stronghold in the South Pacific; the California coast had been attacked by marines; the Oregon forests had threatened by incendiaries; and was readying the attack on Dutch Harbor in the Aleutians. Money, as Army spokesman inadvertently admitted recently, is not considered in war.

● **For the Defense**—What are the defenses of Canol, as presented to Truman investigators?

(1) Hasty approval of the project justified by the subsequent proving of the man Wells field (52 miles north of Norman); the field has potentials of between 50,000,000 and 100,000,000 bbl., and production capacity of 20,000 bbl. daily now been developed by 27 wells.

(2) The refinery to handle 3,000 daily is to supplement the operating 85

## Chemicals Output Disclosed

Declaring that "our production position is now so strong that information concerning it will be of no aid or comfort to the enemy," Donald M. Nelson, chairman of the War Production Board, announced early this week that various production statistics, hitherto withheld for security

reasons, would be made available to American business for planning present and future operations.

First of such data released by WPB were production figures for a group of important chemicals. The list, which is tabulated below, will be expanded when conditions permit.

### Production in Tons

	Aug., 1943	Aug., 1942	% Change
Acetic acid, natural.....	2,089	2,094	- 0.3
Acetic acid, synthetic.....	14,344	11,463	+25.1
Acetic anhydride.....	19,627	18,251	+ 7.5
Acetone.....	14,537	13,222	+ 9.9
Aniline.....	4,264	4,452	- 4.2
Butyl alcohol, normal.....	5,772	5,305	+ 8.8
Calcium carbide.....	54,133	41,381	+30.8
Caustic soda.....	187,187	128,070	+46.2
Chlorine.....	133,650	114,499	+16.7
Copper sulphate.....	6,993	7,458	- 6.2
Formaldehyde.....	21,813	15,913	+37.1
Isopropyl alcohol.....	17,515	14,479	+21.0
Phenol, natural.....	1,077	973	+10.7
Phenol, synthetic.....	7,598	5,728	+32.7
Phthalic anhydride.....	4,783	3,787	+26.3
Potash.....	91,619	70,613	+29.7
Sulphuric acid.....	561,384	599,911	- 6.4

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The job of Monroe is to speed production—to

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Monroe Calculating Machines, Monroe Listing and Accounting Machines—and the expert service that goes with them—stand ready to help you in this emergency.

Call the nearby Monroe Branch; our representative will explain the availability of Monroe equipment under existing conditions. He can also suggest possible short-cuts and simplification of work to save many precious hours.

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### **MONROE SIMPLIFIED METHODS FOR PAYROLL CALCULATIONS**

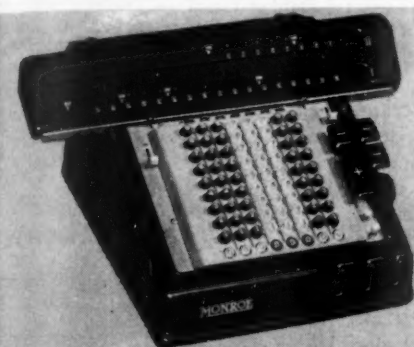
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Monroe Calculating Machine Co., Inc., Orange, N. J.  
Please send information concerning Monroe Simplified Methods for Payroll Calculations.

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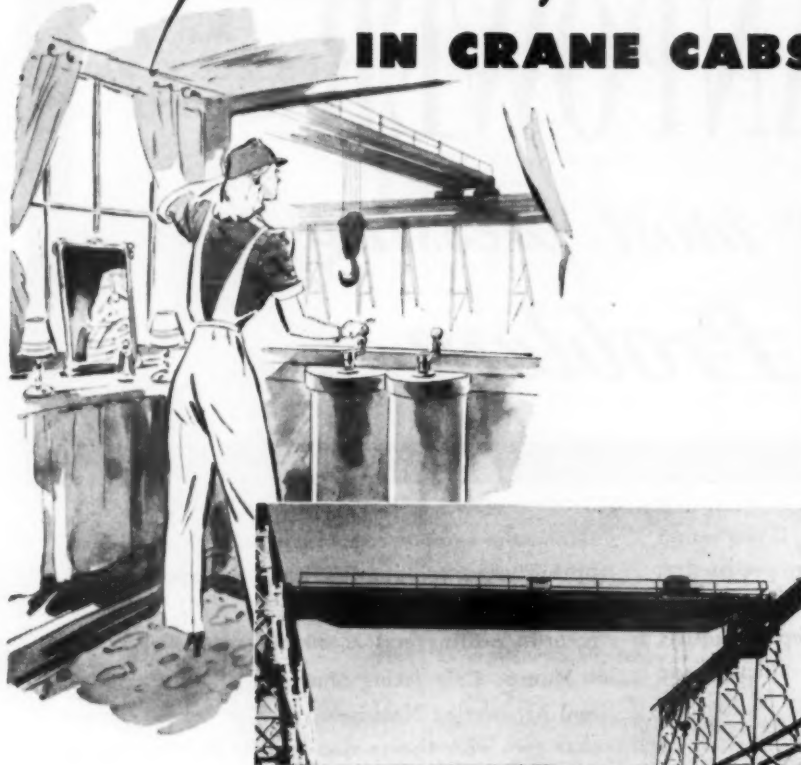
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## MONROE

Calculating, Listing, Accounting Machines

# THE *Feminine Touch* IN CRANE CABS



When we asked for a picture of a woman crane operator, our artist let his imagination run a little wild... but the fact remains that Whiting Victory Cranes—lots of them—are now being operated by women. Satisfactorily, too, because Whiting Cranes are so easy to handle that women run them without fatigue. With very little training and practice, women have become highly skilled crane operators, relieving men for other tasks.

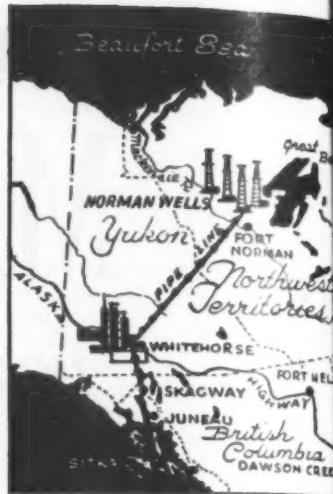
Enlarged production facilities for Whiting Victory Cranes are now permitting ever-increasing use of herringbone gears, rotating axle bearings, and other construction features that for years have helped to give Whiting Cranes their reputation for quiet running and durability. Whiting Corporation, 15661 Lathrop Ave., Harvey, Illinois.

Whiting Victory Cranes are providing vital transportation within America's war industries—under Whiting's unqualified guarantee of satisfactory performance.

*Specify*

# WHITING VICTORY CRANES

Offices in Chicago, Cincinnati, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, and Washington, D.C. Agents in other principal cities. Canadian Subsidiary: Whiting Corporation (Canada) Ltd., Toronto, Ont.



refinery of Imperial Oil, now inadequate to fill local needs.

(3) The pipeline will operate at temperatures down to  $-70$  degrees because the Norman Wells oil has a pour point of  $-70$  degrees; has a paraffin base 38.39 Baume. Because the four-inch pipeline is above ground in a snaking fashion, expansion and contraction will not break it; it can be replaced by a larger line quickly and easily now that the route for the line has already been cleared.

(4) Any shortage of high- or low-octane gasoline will be the result of failure to develop Canol's potentials, not the inherent fault of Canol.

• **Experts on the Job**—When Harry S. Truman and Secretary of War Henry Stimson, and Secretary of the Interior Harold I. Ickes, they are sideswiping American and Canadian construction and oil geology technicians who are now Army bosses in the Canol area.

Chief geologist at Norman Wells is Dr. Theodore A. Link, discoverer of the field and Imperial Oil expert; field superintendent is Walker Taylor, developer of Imperial's Turner Valley holdings; project manager is P. W. Lebright, Standard Oil's Ploesti oil field chief; Army chief is Capt. Theodore Wyman, former Gulf Oil Co. exploration contractor are Imperial Oil and National Drilling Co.

• **Branch Pipelines**—Canol includes a 550-mile pipeline, running from Norman Wells to Whitehorse; a small 110-mile pipeline from Whitehorse to Skagway; a third pipeline from Whitehorse to Watson Lake, big air base on the Alaska Highway; the refinery at Whitehorse with 3,000 bbl. daily capacity. After the war, according to present plans, Canada and Imperial Oil own 50% interests in the wells, Canada reserving first bid on the other part of the project. At present the Army is paying \$1.25 per barrel up to 1,500 bbl., when the rate will drop to 75¢ per barrel. Production during the first few months of 1943 hit 57,729 bbl., compared with 131 in the same period in 1942.



## Co-op Expands

Big refinery and an array of wells, pipelines, and oil leases acquired by C.R.A. as part of self-sufficiency plan.

The ambition of the Cooperative Refinery Assn. of Kansas to offer co-op members gas and oil that was 100% cooperative-produced from oil well to service station was, until 1940, looked off by old-time oil men as sheer whimsy.

But three years ago, C.R.A. achieved a goal of complete integration and, having achieved it, now is turning its eyes to expansion at all levels.

**New Property Acquired**—This week, big oil interests sat up and took notice as the C.R.A. announced acquisition of the properties of the National Refining Co. at Coffeyville, Kan. Total purchase price for all the facilities is expected to run more than \$4,000,000.

Only last summer C.R.A. was chief participant in the purchase of the Globe & Refining Co. at McPherson, Kan., for about \$6,000,000 (BW-July 43, p92) by the National Cooperative Refinery Assn. (an organization of five western co-op wholesalers).

**Sales Skyrocketed**—Credit for the spectacular success of C.R.A. and its

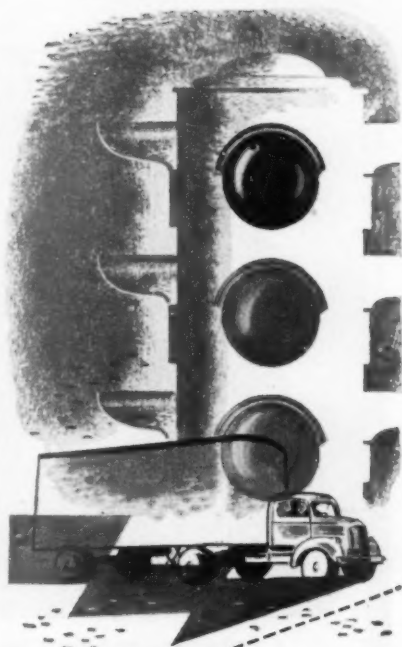
parent organization, Consumers Cooperative Assn. of North Kansas City, Mo., goes to resourceful Howard A. Cowden, president since 1929.

Farmer members of the 300 to 400 retail oil co-ops plowed their savings (co-op synonym for profits) back into the business, and sales skyrocketed from \$309,503 in 1929 to \$2,994,510 in 1935, and to \$6,211,401 in 1940 when C.R.A. got into the oil producing, refining, and piping business.

• **How They Grew**—Membership boomed too, though not so rapidly as the business. It grew from 259 retail organizations representing 100,000 individuals in 1935 to 486 representing 168,100 in 1940. Projected for 1945 are 635 co-ops representing 170,000 families.

When C.R.A. takes over National Refining the first of the year, it will be increasing its facilities by adding a gasoline refinery that uses 13,500 bbl. of crude oil a day at capacity, with an annual output of approximately 81,000,000 gal. of refined fuels; a lubricating oil refinery where bright stocks and neutrals and finished oils are made at the rate of 10,000,000 gal. a year; and a \$15,000 furfural plant, still under construction, which will improve the quality of "lube" oils produced.

• **High-Octane Foothold**—C.R.A. expects to operate also an aviation gasoline refinery adjacent to the Coffeyville plant when the Defense Plant Corp.



NOW YOU CAN

# STOP

ELECTRICALLY

—AS WELL AS START!



MUEHLHAUSEN  
SPRINGS  
PREVENT  
FROZEN BRAKES

As applied to motion, electricity has been considered as a starting and moving force—but now, with Warner Electric Brakes, it is used for stopping as well.

This new brake has another thing in common with many other products—the use of well-engineered springs to control important mechanical actions. Warner relies on Muehlhausen Springs to free the brake bands after the vehicle has slowed or stopped. One grueling run after another, through heat, rain and cold, these springs perform the job automatically.

A mighty responsible job for a little spring! But because it has been designed by experienced engineers, it performs its job unflinchingly.

MUEHLHAUSEN SPRING CORPORATION  
Division of Standard Steel Spring Company  
775 Michigan Avenue, Logansport, Indiana

## MUEHLHAUSEN SPRINGS

EVERY TYPE AND SIZE

## BOMBAY SPECIAL

At Montreal the flag-bedecked Bombay, first of 145 locomotives being built in Canada for export to India, rolls out of the Montreal Locomotive Works. Designed for the Indian State Railways' 66-in. gage rails (below)—the world's widest—the engines are being assembled both at Montreal and at the Canadian Locomotive Co., Kingston, from parts which are supplied from component plants scattered throughout the Dominion. Each of the locomotives weighs 161 tons and carries 13 tons of coal and 4,500 gallons of water.



NARROW GAUGE 36"

STANDARD GAUGE 56 1/2"

INDIAN STATE GAUGE 66"



Modern all-concrete factory of Lane-Wells Co., Huntington Park, Calif.



Above—Concrete paved landing field at Naval Air Station near Chicago. (U. S. Navy Photo)

At left—A concrete arch bridge.

## CONCRETE— a proven structural plastic

Graceful bridges—strong, firesafe war factories—tough impact-resisting pavement for airports and roads—these and many other essential structures are being molded of Concrete, a versatile Structural Plastic.

Backed by years of laboratory research and field development, Association engineers have helped to simplify and improve structural design and bring about faster, more economical construction. They will gladly assist engineers or architects in use of concrete to insure low annual cost war or postwar construction.

### PORTLAND CEMENT ASSOCIATION

Dept. A12a-12, 33 W. Grand Ave., Chicago 10, Ill.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

**BUY MORE WAR BONDS**

has it ready for operation about Feb. of next year. C.R.A. postwar plans envision purchase of this plant after the war to give it a foothold as a purveyor of the higher octane fuels.

Also included in this week's purchase are 269 oil wells and 768 miles of gathering and trunk pipelines which connect these wells, and the wells of other crude oil producers, to the refinery. Some 104,408 acres of undeveloped leases in Illinois, Kansas, Oklahoma, Texas, and New Mexico indicate C.R.A. may expand the drilling program shortly.

• **On the Pipeline**—The National Refinery is located on the Great Lakes pipeline, which runs from Cushing, Okla., through Kansas City to St. Louis, Mo., and the Twin Cities, Minn., and Chicago and which will facilitate distribution to this area.

The new properties are second only to those acquired by N.C.R.A. from the Globe in July. The McPherson refinery has a capacity of 17,500 bbl. of crude a day, or about 175,000,000 gal. of refined fuel annually, and its 229-mile pipeline running to Council Bluffs, Iowa, can deliver 9,000 bbl. of gasoline a day.



### NEWEST SENATOR

This week's induction of Arthur H. Walsh (above) into the U. S. Senate gives New Jersey's upper-house representation a solid business background. The 47-year-old South Orange Democrat is vice-president of Thomas Edison Industries, Inc. He'll serve with Republican Sen. Albert W. Hawkes, ex-president of Congoleum Nairn. Appointed by his business associate, Gov. Charles Edison, Walsh will fill the late W. Warren Barbour's unexpired term.

PRIVATE ENTERPRISE—(continued)

*New York's First Bank  
Established 1784*



*Personal Trusts  
Since 1830*

## “For Centuries To Come”

“The freedom to achieve is as fundamental as any of the freedoms thus far announced. It is at the base of our independence. It is a quality of character. It is a state of mind. It is a vigorous, virile point of view.

“The extent to which we accept that responsibility and all of its implications may well determine the course of our economic and political future for centuries to come.”

... A. L. M. WIGGINS,  
*President of the  
American Bankers Association*

# BANK OF NEW YORK

*48 Wall Street—New York*

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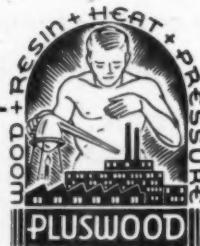


# PLUSWOOD

**A Wood Alloy**  
*is a New Engineering Material that can be made to your order*

For the post-war era, Pluswood offers you a brand new technical material, high in aesthetic value, with an exciting weight-strength ratio. A wood alloy, made by a chemico-mechanical process, it possesses structural strengths exceeding those of many metals. A non-conductor with amazing qualities of density and toughness, Pluswood can be made to your pre-determined engineering description. Thick or thin, pliable or rigid, this wood of new wonders is available in thickness ranging from 16 inches to 1/16 of an inch, and in any size up to 7 feet by 18 feet. Highly resistant to swelling, shrinking, corrosion, fire, and thermal shock—Pluswood will retain its dimensional stability so completely that only micrometer measurements indicate changes.

A dependable, responsible organization stands behind Pluswood from forest through saw mills, veneer mills and factory — established by the Lullaby Furniture Corporation, since 1897 America's foremost manufacturer of juvenile furniture. Pluswood maintains a laboratory service that you are urged to use. Write for an engineering bulletin that will give you more complete information.



- WOOD** Select northern birch or maple — cut from vast northern timber reserves.
- + RESIN** Impregnated into veneers by methods and techniques developed by Pluswood research.
- + HEAT** 300 K. V. A. high frequency electrostatic generating unit—largest in the country for this purpose—delivering 540,000 B.T.U.'s per hour.
- + PRESSURE** Largest and most powerful press in the plywood industry—with total pressing capacity up to 5,000,000 pounds.

**PLUSWOOD Incorporated, Oshkosh, Wis.**

*Associated Companies*

NORTHERN HARDWOOD VENEERS, Inc., Belmar, Wisconsin  
 LULLABY FURNITURE CORPORATION, Stevens Point, Wisconsin  
 ALGOMA FOREST PRODUCTS, Ltd., Bruce, Ontario, Canada

## Dent in Beer Fro

Purchase of Blatz Brew by distiller breaches brew aloofness to liquor trade, and further diversifies Schenley

First break in the dike of the beer industry's long effort to dissociate from hard liquor makers, morally at the tax collector's eye, came last when Schenley Distillers Corp. announced the purchase of Blatz Brew Co. of Milwaukee.

• **President to Stay**—Schenley is paying \$6,000,000 for the 92-year-old brew with a million barrels a year production capacity. Frank M. Gabel will continue as president of Blatz and there will be no change in the company's operations. Transfer of all stock will be completed by Dec. 15.

Entry into the beer business is the latest aspect of Schenley's spreading (BW—Apr. 24 '43, p. 32). Yet company spokesmen insist that Schenley's important diversification is in the distilling field—in the production of butadiene, penicillin, cattle feed,



## FRENCH PAYOFF

Foreign Economic Administrator T. Crowley (left) gratefully accepts \$15,000,000 check to cover American nonmilitary supplies shipped to French Africa (BW—Nov. 6 '43, p. 3). The cheerful giver is Henri Hoppert, minister plenipotentiary of the French Committee of National Liberation. Representing the committee's fourth payment, the check brings to \$3,340,000 the total paid for shipments to July 31. These included structural steel, bricks, chemicals, fertilizer, and machine parts. Military supplies, however, are sent lend-lease, and French reciprocate with mineral, cork, and cordage fibers.

# HOME SWEET HOME ...in a Bag!

Over here...and over there...millions of Americans are now almost literally carrying their homes on their backs.

At training camps, on maneuvers, in far-off battle zones, they're ready to set up housekeeping wherever they drop their barrack bags.

For those tightly packed, bulging, blue or olive drab bags hold most of our soldiers' personal belongings. You'll find raincoat, overcoat, galoshes, underwear, gloves, jammed in with other living necessities...and perhaps, on the top, a bucket of letters with a snapshot of a girl.

The American soldier is today's greatest traveler, and his barrack bag will likely be his home sweet home for the duration.

Making barrack bags is one of Bemis' many war assignments. A big job, but our facilities and experience have enabled us to take it in stride.

You see, war has brought bags—industry's most economical shipping containers—to the fore in many new and striking ways. Their versatility and adaptability is shown in the successful way they are replacing containers made from materials now scarce or needed elsewhere.

If you have a packaging problem, present or future, investigate bags. We offer you the services of our laboratories and engineering department.



## Bemis Bro. Bag Co.

GENERAL OFFICES: ST. LOUIS • 23 PLANTS THROUGHOUT THE COUNTRY



☆  
Buy more  
War Bonds  
☆

mins, and proteins (BW-Jul.24'43, p36; Aug.7'43, p99).

• **Wine Operation Grows**—Purchase last week of the Mattei Winery of Fresno, Calif., is strong evidence that Schenley is not giving up first place in the distilling companies' scramble to close the domestic wine field. Mattei properties, founded in 1900, have a 2,000,000-gal. wine storage capacity.

With Schenley's buying of Roma Wine Co. in 1942 (BW-Nov.21'43, p126), it became the largest single factor in the domestic wine industry. Banned from radio advertising of whisky, Schenley has effectively brought the company's name before the listening public in promoting wine sales.

• **Advantages Counted**—The purchase of Blatz is a triple investment: an inroad in a profitable new field for the company, a medium for public relations work, and (most important) a consolidation of alcoholic beverage production.

## SPEEDING THE BOMBSIGHTS

The Navy took over part of Remington Rand's plant for precision instruments at Southport, N. Y. this week, announcing that production there has been far behind schedule and of an unacceptable quality. The plant is subcontractor for Carl L. Norden, Inc., New York, makers of the bombsight.

Rear Adm. Harold G. Bowen will direct operations of the "N" division seized, and Norden has been appointed

manufacturing agent. Wage rates, hours of work, overtime, and general working conditions will remain unchanged.

The order, result of instructions from President Roosevelt, contains the standard provision for termination of government control within 60 days after the President determines that the plant "will be operated in a manner consistent with the war effort."

## Mining-Law Fight

Plan to make discoverers of new claims become licensees of and pay royalties to U. S. is sharply criticized by miners.

Western lore is full of exciting tales of the discovery of a valuable ore deposit on the public domain, the staking of a claim, the race for the county recorder's office. Once recorded, claims have been valid indefinitely provided a certain amount of work has been done yearly; at the end of five years, they have been patentable—transferred into the private ownership of the claimant.

• **Claims Limited**—Metal-mining claims still may be developed in this fashion. But, in 1920, Congress passed the General Leasing Act which took coal, oil, oil-shale, potassium, phosphates, sodium compounds, and gas, located on the public domain, out of the general category.

Their discoverers, since the act came effective, may only lease from government on a royalty basis.

But, even now, the government does not know how many valid claims on gas, coal, etc., were filed before enactment of the 1920 law. These have remained on file with county recorders; only the patented have come to the federal authorities' notice. The same is true of metal-mining claims.

• **Proposed Changes**—Now the Interior Dept., the government's agent as to minerals on the public domain, seeks to go a step further immediately—and to steps further subsequently—on the philosophy that minerals on the public domain should remain a public asset.

The immediate step, embodied in Senate Bill 1139, introduced by Senator Carl A. Hatch of New Mexico at request of the Interior Dept., is to require the holder of any unpatented mining claim on the public domain, covering the minerals named in the 1920 law and unregistered with the General Land Office, file with that office a sworn statement under oath of the claim, including all relevant information.

• **Penalty Prescribed**—Failure to file within 180 days would void the claim and the validity "shall remain open to inquiry and determination." (Claims made since 1920 are registered with the Land Office; hence this bill applies only to the many thousands of old claims made at county recorders' offices prior to 1920.)

Joel Wolfsohn, assistant commissioner of the Land Office, said at a recent Denver hearing by a subcommittee of the Senate Public Lands Committee that the government "only wants to know who is on its property." But there is more than that to the program.

• **Extension Advocated**—Actually, the Interior Dept. makes no secret of the fact that it wants to accomplish two additional ends:

(1) It wants all metal-mine claims on the public domain (those not covered by the 1920 law) registered with the General Land Office.

(2) Once these metal claims are registered, so that the government knows where all valid claims are located, the terms of the Leasing Act of 1920 would be extended to all metals and minerals.

The government would remain forever the owner of all mineral wealth subsequently discovered on public lands; would lease deposits to developers, and would collect royalties. Men could still make money in mining, but they would make it as lessees, not owners; the government, as their landlord, would share in the profits—but not the losses.

• **Poll of Opinion**—McGraw-Hill's Engineering & Mining Journal recently outlined the program, characterizing it as a complete overturn of a western mining-law system that had existed so long as to be regarded as bestowing a vested



## SAVIOR AT SEA

By making sea water quickly potable, a handy new desalting kit lengthens the odds against death aboard life rafts. It consists of a plastic bag and a 14-day supply of chemical briquets which process a pint of water each. A



shipwrecked man merely fills the bag from the ocean and drops in a briquet (right). In 20 minutes he drinks from the bag (left) via a tube, and a filter retains the precipitated salt. Developed by New York Permutit Co., the easily stowed desalting outfit has the approval of the Navy.



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MULTILITH reproduction by U.S.A. Engineers of aerial photo made from reconnaissance plane. In this photo five emplacements are visible—the small key sketch below will help you find them.

## Can You Spot The Machine Gun Nests?

**A**TTACK plans that once had to wait many precious hours are now completed in a fraction of the time because of Multilith\* machines.

In a special trailer used by the U. S. Army are complete photographic apparatus and Multilith duplicators . . . A plane swoops low and drops negatives of aerial photos. They are rushed into the trailer, developed, transferred to a Multilith master sheet, and the Multilith machine turns out a dozen—or hundreds—of clear, accurate reproductions.

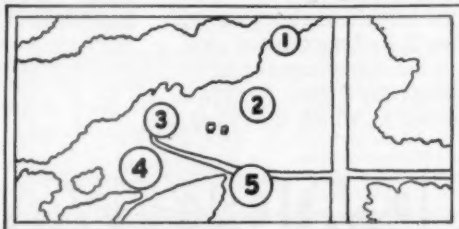
These copies are sped to waiting command posts—to air force, artillery, tank corps, infantry. Planes, guns, and tanks swing into concerted action against the target.

Serving every branch of our armed forces—at depots, training centers, on Navy ships, and right up on the fighting fronts, Addressograph-Multigraph\* duplicating and repetitive writing machines are speeding, simplify-

ing and reducing the stupendous volume of paper work required. Materiel moves faster, manpower is released, fighting men trained more quickly by Addressograph-Multigraph machines of business which have gone to war.

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\*T.M. Reg. U. S. Pat. Off.



# Multigraph

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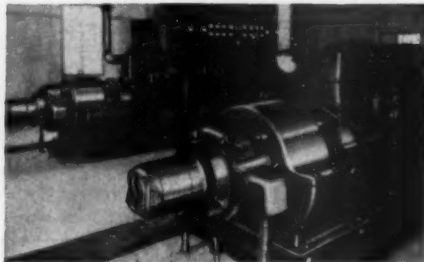
SIMPLIFIED BUSINESS METHODS



## "Even the most hardened warrior dreams"

**T**HERE is no glory in war for a woman. She does her part—today in uniform—to end the blood and tyranny that threaten her home and future. Off duty, she dreams of the woman's world she's put aside for the duration—nylon hose, alluring hats, a home with every modern convenience.

Here at Bardco, our war assignment is to make essential electrical equipment. We've learned a lot about new materials and methods that make possible undreamed of improvements over pre-war products. When Johnny and Jane come marching home, they'll find surprising new Bardco developments in electrification for the homes in which they live.



● Bardco electric generating plants like these are the primary source of all-important electric light and power at many of our Armed Forces' bases—and those of our Allies, too.

# BARDCO

Reg. U.S. Pat. Off.



## MANUFACTURING & SALES CO.

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right, and asked for the industry's opinion. It listed advantages as follows:

**Advantages:** A substantial public income of which the states would receive a share; conservation through reduction of waste and greater ultimate recovery; having the government as a partner "in adjusting production to market demand" whereas attempts at such adjustment by private companies might throw them foul of the antitrust laws; control of monopoly and of speculative tendencies; enhanced care and safety in operation and maintenance of reserves of essential minerals.

**Disadvantages:** An increased government staff and increased government costs; lessened freedom for the citizen; danger of government dictation; possible instability of policies depending on who is in power; and danger of political favoritism.

● **Miners' Views Clear**—Returns of opinion are not yet in, but wherever mining men have been heard, they oppose the program, and they oppose S. 1139 as the camel's head nudging into the tent. At the recent hearings, Secretary R. S. Palmer of the Colorado Mining Assn. said S. 1139 would only strengthen the grasp of the Interior Dept. on the industry, and thus prevent development. Warwick Downing, Colorado's member of the interstate oil compact commission, said leasing provisions on oil had restricted wildcat drilling.

One specific situation S. 1139 aimed at is the status of millions of acres of oil shale lands in Colorado and Utah, containing an estimated 75 billion barrels of recoverable oil (BW—Sep. 11'43, p. 28) where hundreds of thousands of acres were claimed some 30 years ago.

● **Invalidation Effort Fails**—Ickes, nearly a decade ago, tried to disprove these oil claims, on the ground that assessment work hadn't been kept up, but was defeated in a Supreme Court decision.

These claims, thrown together into huge blocks of acreage, have been used by the claim-owners in all respects as property, including leasing out the surface grazing rights. The Grazing Service, in some instances, has leased parts of the public domain to licensees, who were then driven off by others who said they had leased these rights from the oil shale claimants.

## STATE LIQUOR DEAL O.K.'D

Thirsty residents of Oregon and Washington were smiling broadly this week when OPA approved sale of the Waterfall-Frazier and the Shawahan distilleries along with about 1,000,000 cases of bourbon whisky to the liquor control commissions of the two states.

Purchase contracts were turned down by OPA when first submitted for approval a few weeks ago (BW—Nov. 6'43, p. 16), and it had been assumed generally that the deal was blocked.

Early this week, however, OPA approved the transactions while lower-

the ceiling price on the liquor by \$100,000 for the entire stock in the distilleries. The rated price at which the whisky was to be sold to the commissions under terms of the original contracts was \$3 a gal. The ceiling price set this week by OPA reduces the price by about \$1 a gal.

The whisky stocks will be split 50-50 between the two commissions, and the reduced price will enable them to sell the bourbon in their state liquor stores at approximately what has been the Waterfall-Frazier going price of \$3.15 a qt. But that would be upped about \$1 a qt. if the federal gallonage tax is increased from the present \$6 a gal. to the proposed \$9.

State attorneys of both states have approved the deal.

## Two-Way Haul

Cargill's purchase of grain elevator in Alabama and its boat building in Minnesota imply plans for north-south traffic.

With an eye to the future, Cargill, Inc., one of the nation's biggest grain firms, has purchased a 150,000-bushel elevator at Guntersville, Ala., on the Tennessee River.

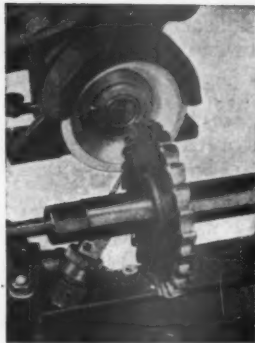
**Postwar Aspirations**—Already operating an inland shipyard on the Minnesota River at Savage, Minn., where it is turning out \$35,000,000 in Navy tankers and river towboats, Cargill is known to have aspirations for developing the Savage location as a postwar river terminal, serving the great grain region funneling through Minneapolis, 20 miles away.

With the southern location, Cargill has potential northern and southern terminals for hauling grain down, coal and iron products back.

**A New Barge Line?**—Cargill is using existing river barge services to haul barley and oats to Guntersville from established grain terminals in the Twin Cities, corn from St. Louis and the Illinois River territory.

But with an established shipyard, the construction "know-how" on boat building, a nine-foot channel to its own Minnesota River location, and plenty of river frontage for handling grain, coal, and other commodities, it is expected that Cargill will be in the barge line business after the war, if not as a contract carrier, at least as a private operator.

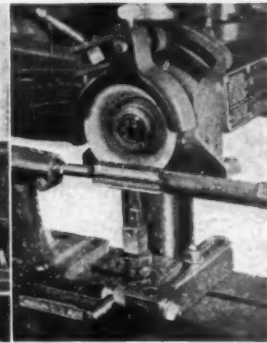
**Sixth Tanker Launched**—Cargill recently launched its sixth 4,000-ton, 320-ft. tanker for the Navy at Savage, 2,000 miles from the ocean waters it is to ply. Of the five others, two already have moved down the Minnesota and Mississippi rivers to the ocean; and Cargill



Set-up in grinding a side mill-cutter.



Grinding a taper reamer.



Grinding a straight-toothed machine reamer with a cup wheel.

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## Delta Tool and Cutter Grinder

Here is the latest development in Tool & Cutter Grinder design, combining the best features of units of this kind — and its low cost permits its use in all types of shops where accurate grinding must be done.

The new Tool & Cutter Grinder attachment has been added to the famous Delta Toolmaker Surface Grinder (machine may also be used as a surface grinder).

Almost any conceivable angle can be ground. Delta construction features assure perfect alignment and freedom from play, for extreme accuracy over a long, useful life. The machine itself is substantially built (weight over 700 lbs.) and machined to very close tolerances.

For a real find that gives creditable results for years, investigate the modern, goodlooking, efficient machine. Consult your Delta industrial distributor (Delta sells only through distributors) or write for new bulletin.



### Specifications

Wheels must have 1 1/4" hole.  
Table surface 5 3/4 x 13".  
Traverse feed, one graduation is .001".  
Maximum vertical adjustment of wheel by means of micrometer is 3/8", each graduation is .0005".  
Spindle speeds with a 60 cy 1750 R.P.M. motor are 3200 and 4200 R.P.M.

Price f.o.b. Milwaukee without wheels, motor, or switch... **\$370.00**

Priority required, A-1-A or better, under Restrictions of Limitations Order L-237.

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• Sound vibrations set in motion by the mere touch of a hand are picked up by detector units of an Automatic Alarms System, and converted into visible and audible warning signals that dispatch guards to the actual zone of danger. Many American industries, large and small, are today using modern A.A.I. Automatic Alarms, at relatively low cost, to guard properties and plants, 24 hours a day, from the ever threatening danger of sabotage, espionage and theft. Surround your plants with this electronic protection.

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is at present at work on twelve more. In addition, the company also has built three river towboats for the Defense Plant Corp.

Cargill jumped into boat building in 1937 when it was unable to get acceptable bids on a revolutionary type of grain barge to be used on the Erie Canal.

## Choice of Fuels

Bureau of Mines working on three methods of producing synthetic gasoline as a hedge against petroleum exhaustion.

The United States isn't going to be caught short of petroleum as it was on rubber if the Bureau of Mines can help it. The bureau is readying three methods of producing synthetic gasoline from coal, oil shale, and natural gas.

• **More Expensive**—The fuel will cost more than by present crude oil refining methods, but mass production would cut these costs. Up to now, only laboratory tests have been made.

Standard Oil probably knows more about synthetic gasoline than any other of the big U.S. oil companies but hasn't been pushing its production. There hasn't been the need, for one thing. In Germany, on the other hand, from one-half to two-thirds of the gasoline is synthetic.

• **More But Smaller Fields**—The Bureau of Mines, looking further ahead than the government did on tin and rubber, envisages a petroleum shortage maybe ten years hence. The number of new fields reported rose from 162 in 1936 to 348 last year. But total petroleum reserves they offered fell from 2,392,865,000 bbl. for the 162 in 1936 to

507,299,000 for the 348 last year. Another way of putting the situation is that an average new field in 1936 held 14,771,000 bbl.; last year only 1,458,000 bbl.

Sen. Joseph C. O'Mahoney, from the coal and oil shale state of Wyoming, was successful in pushing through a bill (S.1243), after its approval by the Senate Public Lands Committee, that would authorize appropriations up to \$30,000,000 for two or three pilot plants for synthetic gasoline. The Bureau of Mines will start work as soon as Congress actually votes the money.

• **Finger on the Scale**—In determining location of the plants, the availability of materials, the methods to be pursued and other technical factors must be taken into consideration. But political will, of course, have a finger on the scale when decisions are made.

If coal hydrogenation is pushed, Pennsylvania or Alabama might be the site. Oil shale methods could be used in Colorado, Utah, or Wyoming. If gasoline is to be made from natural gas—and this is the cheapest of the three methods—Texas would be favored. The trouble with natural gas is that the supply is more limited than coal.

• **Transportation a Factor**—Nearness to raw materials is, of course, more important for the plants than proximity to areas of greatest consumption, but transportation costs may affect sites. The Mississippi River or the Great Lakes could be important factors in reducing costs. Danger from enemy bombers in the next war isn't considered too important since the high-pressure boilers and pipes required aren't likely to be damaged except in the event of direct hits. There may be action on sites before spring.

Yields of synthetic gasoline vary from 136 gal. per ton of Utah coal to 63 gal. from North Dakota coal. Around Pitts-

## What's Happening to the Cost of Living

	Food	Clothing	Rent	Fuel, Ice, & Electricity	House Furnishings	Misc.	Total Cost of Living
August, 1939 .....	93.5	100.3	104.3	97.5	100.6	100.4	98.6
January, 1941* .....	97.8	100.7	105.0	100.8	100.1	101.9	100.8
October .....	111.6	112.6	107.5	104.0	114.4	106.9	109.3
October, 1942 .....	129.6	125.9	108.0	106.2	123.7	111.8	119.0
November .....	131.1	125.9	108.0	106.2	123.9	112.7	119.8
December .....	132.7	125.9	108.0	106.3	124.1	112.8	120.4
January, 1943 .....	133.0	125.9	108.0	107.3	123.7	113.1	120.6
February .....	133.6	126.2	108.0	107.2	124.1	113.6	121.0
March .....	137.4	127.6	108.0	107.4	124.5	114.5	122.8
April .....	140.6	127.9	108.0	107.5	124.8	114.9	124.1
May .....	143.0	127.9	108.0	107.6	125.1	115.3	125.1
June .....	141.9	127.9	108.0	107.7	125.4	115.7	124.8
July .....	139.0	129.1	108.0	107.6	125.6	116.1	123.9
August .....	137.2	129.6	108.0	107.7	125.9	116.5	123.4
September .....	137.4	132.5	108.0	107.7	126.3	117.0	123.9
October .....	138.2	133.0	108.0	107.9	126.5	117.6	124.4

Data: U. S. Bureau of Labor Statistics; 1935-39 = 100.

\* Base month of NWLB's "Little Steel" formula.

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Here are the bombs . . .

ON

TARGET

## Kodak optical systems for fire control destroy the legend of "German supremacy" in lens making

For America's bombsights—which have shown our enemies the bitter meaning of "high-altitude precision bombing"—most of "the optics" are made by Kodak.

For our Army and Navy, Kodak also makes 29 of the most complex types of optical systems for fire control—the sighting of guns—including the famous height finder for anti-aircraft.

GERMANY has enjoyed a reputation for world leadership in lens making. But—as so often happens—reputation outlived performance.

Well before Pearl Harbor, Kodak optical research was developing lenses superior to any ever made by anybody, anywhere. A major advance has been the perfecting for new, finer cameras of a revolutionary new optical glass which

gave lenses greater speed—definition . . . or could more than double the "field of view" of a fire control periscope.

This glass was immediately incorporated in instruments for fire control . . .

Effective fire power—hits, not "tries"—is the result of sighting through a series of lenses . . . an optical system . . . which locates, magnifies, and "ranges on" the target.

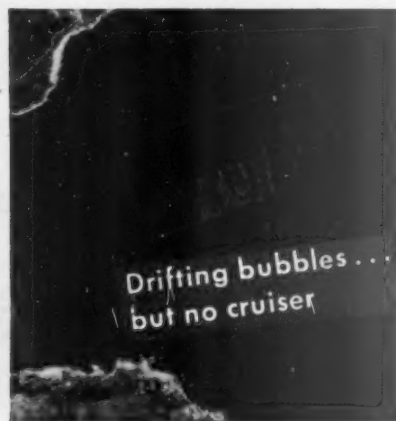
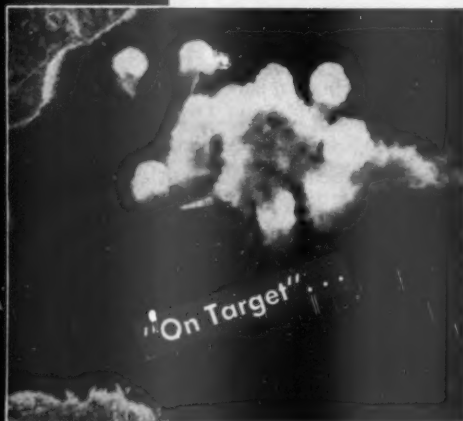
Army Ordnance experts now report: "We have examined captured German sights and periscopes and, element for element, we are turning out better material."

The effectiveness of American fire power is making history . . . Eastman Kodak Company, Rochester, N. Y.

**REMEMBER CORREGIDOR?** . . . and the last words over their radio—"Just made broadcast to arrange for surrender . . . everyone is bawling like a baby . . . I know how a mouse feels. Caught in a trap waiting for guys to come along to finish it up." Corregidor is a stern example to us at home. **BUY MORE WAR BONDS.**

Serving human progress through photography

Here is an enemy cruiser safe behind her torpedo net . . .



## PRECISION PARTS

### AS THOUSANDTHS SHEER



Too fine for the eye to see.

This finely machined, pressure-tight shaft is for a delicate instrument of war. To the eye, it is just a plain steel shaft. To the micrometer, it has a different diameter at each end, with a gradual taper in between. The difference in diameters is only .0002" with a total tolerance of .0002" on the large diameter. Each shaft must be heat-treated before grinding. It must be kept straight, not varying more than .0005" in all its length, and not more than .0001" for any one-inch unit of length.

Ace, with modern heat-treating and centerless grinding methods, is turning them out by the thousands. Meeting these war-time demands for unbelievable accuracy, on a mass-production basis, has developed Ace ingenuity. Ace can therefore offer manufacturers many advantages in the profitable post-war markets. Here under one roof is a source of supply for small parts or assemblies which call for stamping, machining, heat-treating, or grinding. If you are thinking in terms of present production, we have capacity available from time to time. If you are planning for the future, let's talk it over now.

Send for Booklet



**ACE MANUFACTURING CORPORATION**  
for Precision Parts



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40 • General News

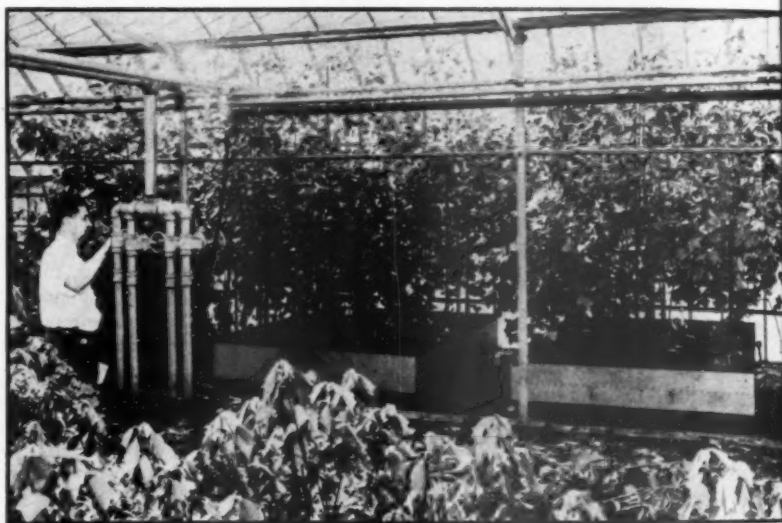
burgh, the yield has been 130 gal. Alabama coal yielded 134 gal. in laboratory tests.

● **How Costs Compare**—Costs have run as high as 25¢ a gal. from coal, compared to 5¢ or 6¢ from crude oil and 6¢ to 12¢ from natural gas. So none of the methods promises cheaper automotive fuel.

Several big oil companies are showing interest in the government project as the techniques developed would become public property open to all.

The hydrogenation method is easy to understand. Coal contains more carbon than any other element but also has hydrogen, oxygen, nitrogen, and sulphur. Petroleum consists largely of carbon and hydrogen, having perhaps twice as much hydrogen as coal. To convert coal to petroleum, hydrogen is added to a paste made of pulverized coal, and the oxygen, nitrogen, and sulphur are taken away.

● **Manpower No Hitch**—A small plant could produce 3,000 bbl. to 3,500 bbl. a day. Leaving itself lots of elbow room, the Bureau of Mines says a pilot plant can cost from \$2,000,000 to \$20,000,000. Steel would have to be allocated by WPB for construction, but the engineering manpower could come from the butadiene rubber plants now nearing completion.



### PLANTATION UNDER GLASS

What strains of cotton grow best and how is scientifically determined through a research program being carried on by Goodyear in a greenhouse laboratory (above) near Akron. There, since 1937, varieties collected from breeders and state experimental stations have been grown in gravel and water-filled tanks, the results of these hydroponic tests being translated into field fertilizer tests in the Cotton

England took the hydrogenation idea from Germany in 1935 and built a 3,450-bbl. plant near Billingham. Imperial Chemicals paid for it. Because gasoline costs more in Britain than in the U. S., synthetic could compete more readily with natural fuel.

### Goats in Demand

Dairy products shortage is responsible for growing favor in which does are held as source of milk, butter, cheese, meat.

As the country's supply of dairy products becomes increasingly tight, consumers may take more seriously the fulsome praise that goat owners have always lavished on their herds as a source of milk, butter, cheese, and meat—and often modest cash income.

● **New Herds Grow**—That the number of back-yard goats is increasing is shown by records of the American Milk Goat Record Assn., Marshall, Ill. Fred Keifer, secretary (and himself a breeder of Toggenburgs), reports that the 3,000 purebred goats registered by the association in the first eight months of the year represent a 15% increase over the

Belt. Arizona, persuaded by Goodyear in 1939 to allow field tests of new strains, has favored Wilds 9, one of the newcomers. By 1942, 2,000 acres of the strain, comparable to long-fiber Egyptian cotton, were under cultivation. This year the planting was increased. Goodyear's interest is in the development of better strains for improved tire fabrics, but a byproduct may be more profit for growers through preclusion of the growing of low-yield strains of cotton.

Business Week • December 4, 1943



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This picture was prepared with the help of Fletcher Pratt, noted military authority.

## PRELUDES TO VICTORY!

swift and hard, U. S. forces strike one key objective after another.

In landing operations, as in every battle scene, large quantities of Westinghouse-made weapons and equipment are fighting. On the production front Westinghouse Air Conditioning and Industrial Refrigeration provide correct conditions of temperature, humidity and cleanliness to make possible uniform quality, high precision, fewer rejections, faster output.

When peace comes, a thousand new-day benefits will result from Westinghouse "Conditioning". Better products at lower cost, greater comfort—better living for all.

Back of Westinghouse skill in solving varied "conditioning" problems are years of experience—also a hermetically-sealed compressor which assures economy, dependability, long life. Inquiries are invited from producers of your equipment and from postwar planners.

**WESTINGHOUSE ELECTRIC & MFG. CO.**  
41 Page Boulevard Springfield, Mass.  
Plants in 25 Cities... Offices Everywhere



**RAPID FIRE SLUGGER.** For perfect fit of intricate parts of Garand rifles, inspection gages are checked regularly against master gages kept accurate in rooms held at constant temperature by air conditioning.



**CALLING ALL SHOTS.** Communications devices, such as "Walkie-Talkie" pack radios, have vital delicate parts. These are protected by air conditioning against excess humidity, temperature and dust during manufacture.



**AIR POWER.** For extreme accuracy needed on many aircraft parts and instruments, the controlled temperature, humidity and air cleanliness provided by air conditioning make uniform results possible.



**SEE POWER.** Grinding lenses and assembling precision parts of binoculars are delicate operations in which constant, specified air conditions are needed for accuracy and uniformity.

Turn to John Charles Thomas, NBC, Sunday, at 2:30 P. M., E.W.T.

# Westinghouse Air Conditioning

GEARED TO A THOUSAND WARTIME NEEDS

*Send your  
Christmas Gifts  
before...*



**DEC. 10<sup>th</sup>**

Because of the limited equipment and the heavy burden placed on all transportation services, the Office of Defense Transportation is urgently requesting you to *ship your gifts and packages before December 10th.*

Help us keep the vital transportation lines of the nation flowing smoothly over the Christmas period by shipping before December 10th.



NATION-WIDE

RAIL-AIR SERVICE

## NO WELCOME MAT

There are indications that Pacific Coast cities, with housing facilities already strained almost to the limit (BW—Nov. 13 '43, p34), are preparing for an influx of Army, Navy, and government personnel when the Pacific war is intensified.

Last week, in San Francisco, committees representing business groups, federal agencies, and the Army and Navy were set up to develop more housing facilities and to carry on a national campaign urging visitors to stay away from the usually hospitable city.

Conventions and sales meetings will be asked to stick to inland cities. Service men's families and friends will be urged to say their goodbyes at points east.

San Franciscans with rooms in their homes to rent fear "undesirable guests." So a committee will try to provide some protection for home owners. Also the Navy will set up a new central housing bureau for service personnel with powers to guarantee rentals and payment of damages.

San Francisco hotels have been limiting the stay of civilian guests to five days and announced last week that, effective immediately, service men would be likewise limited except when their commanding officers directed otherwise.

same period last year, and 25% over that of 1941.

Significantly, 30% of the transfers of registered stock are going to persons who have never kept purebred animals before. At least half of the buyers are persons acquiring two, four, or five does for a family milk supply. (Few owners of less than ten animals find it profitable to keep a buck.) Breeders are unable to supply the demand for purebred stock with high milk-producing ancestry.

• **The Olfactory Test**—The general public might humorously regard goats as ill-smelling beasts with a taste for tin cans, but goat owners indignantly point out that only the bucks have an offensive odor (and they only during the breeding season from September to March). Goat-keepers almost universally regard their does and kids as affectionate pets, as well as valuable animals. Not a few owners started their herds after some favorable experience in feeding goat milk to an invalid or sick baby. Hence they have implicit faith in its health-giving properties. And though they are always loath to see one of the herd led away, they'll smack their lips over chevon (goat meat) delicacies like barbecued kid.

Experienced owners urge beginners

start with at least two good grade does for a year-round milk supply because goats need companionship; because a strain of one of the improved varieties usually means greater production; grade because it's better to learn the business on comparatively inexpensive animals. Such does are purchased for \$35 to \$40 apiece. In contrast, you couldn't buy a mature purebred doe offered by an outstanding breeder like Mrs. Carl Sandberg for less than \$100.)

**Profit Makers**—Cash outlay to keep does is about \$40 annually: \$30 for commercial mixed feed and leguminous hay, supplemented by lawn trimmings and pasture, plus \$10 service fees. Labor amounts to about an hour a day for milking and milking, and cleaning the udders. In return, two good does will each produce an average of two quarts of milk a day for ten months. Estimated at a quart (since it replaces cow's milk at that price), their combined production of 1,200 quarts annually is worth \$4 to the family purse. In addition, a purebred kid will bring \$40 to \$50; a commercial kid, \$25. Enough commercial kids to substitute to raise them to market age (five months) costs about \$4.

Nevertheless, goat dairying seems destined to remain a small-time business, due to the widespread prejudice against the milk and the consequent small market and high distribution costs. A typical dairy of 20 to 30 does, with an adequate market for the milk, can reasonably expect to net \$2,500 to \$3,000 annually. But most such dairies depend more on the sale of breeding stock for their profits than on the sale of milk, even at prices ranging from 50¢ to \$1.00 a quart.

**Limited Market**—In certain areas, such as Southern California, the market is well developed. But in northern cities the use is confined to persons or babies allergic to cow's milk. For example, the commercial distribution of goat milk in Chicago is not more than 125 quarts daily. Dairies handle it only as a convenience to customers, since it costs them to deliver, against a profit margin of 50¢ to 5¢. Their sole supplier is Dairy Specialties, Inc., which manages to break in only because its source, a Wisconsin farm, happens to be on its regular collection route.

The country's goat population is increasing steadily. A.M.G.R.A. has registered more than 74,000 goats since its inception in 1904—23,000 of them since 1936. A younger association, the American Goat Society, has substantially increased registrations, with some duplication between the two—which, incidentally, are now in the throes of consolidation. But probably less than half of the goats in this country are registered. The 1940 census reported 118,896 goats milked on 33,232 American



## INDUSTRY HAS A BIG JOB TO SHOULDER *It Creates... It Produces*

Only a strong, unshackled Industry can do it.

We've always leaned upon industry and always will... for industry provides the goods, the jobs, the wages that give us everything we have.

Less than one-third of gainfully employed people are in industry. Their wages provide work for the more than two-thirds remaining. This group, including professional men, such as doctors, lawyers, preachers, as well as service people of every type, can only be as prosperous as is industry.

How does industry get started? It is very simple. A man, like you or me, gets an idea... becomes an inventor. He knows a friend who has saved up a few dollars. They go into business together. They produce something the public wants, something the public buys.

The business grows. New plants are built. Thousands of men get wages. People have money. They buy. The snowball starts rolling and keeps rolling.

This is Free Enterprise. It is based upon a willingness to run the risk of investing money; the urge to find new and better methods and products; and a hope of profit.

Wealth cannot be created by any other system. That's the way we start the enterprises that lead to prosperity—and, what is far more important in the postwar period—to the creation of JOBS.

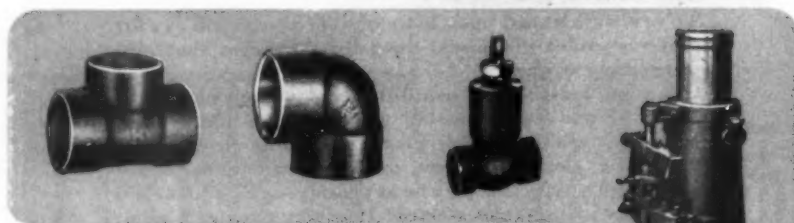
A community cannot exist without Industry. Industry does have a big job to shoulder... and we all should help.

*Geo. W. Trundle Jr.*  
President

### THE TRUNDLE ENGINEERING COMPANY *Consulting Management Engineering*

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CHICAGO • City National Bank Bldg. • 208 S. La Salle Street  
NEW YORK • Graybar Building • 420 Lexington Avenue





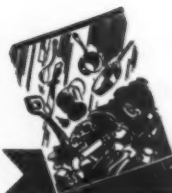
**Y**our job, too, is still unfinished. The equipment and materials necessary to continue the successes so far registered by our armed forces must be of the highest quality. Your production line cannot fail if you **USE** only the **BEST** — W-S Forged Steel Fittings and Valves, together with such shop equipment as W-S Hydraulic Jacks, Hand Pumps and Wire Rope Shears. The Watson-Stillman two-diamond emblem on these products assures superiority. **BUY** only the **BEST** and your good judgment will be reflected in your production. The Watson-Stillman Co., Roselle, N. J.



*This complete line of W-S products is described in detail in a series of booklets, one for each product. Copies will be sent free, on request.*

## WATSON-STILLMAN

Distributor Products Division  
Engineers and Manufacturers of Forged Steel Fittings, Valves,  
Wire Rope Shears, Pumps, Jacks and Hydraulic Machinery  
and Equipment.



*For Victory \*\*\* Let's all be Scrappers*

farms, but this would not include milk or kids. The most popular breeds are Toggenburgs, Saanens, Nubians, and French Alpines, in that order. They were all originally Old World stock. After the war, United States breeders hope to turn the tables by marketing some of their purebred animals in South American and in European countries whose herds are undoubtedly sadly depleted.

### REPLACEMENT TUNNEL

Because there is no place where traffic can be detoured while repairs are being made on an old tunnel through Boxman Pass, on the Northern Pacific Railroad's main transcontinental line twelve miles north of Livingston, Mont., the War Production Board has approved construction of a new million-dollar tunnel by the railroad.

Trouble started about ten years ago. After the roof had caved in, recent efforts to make permanent repairs had to be abandoned because of heavy traffic.

As there was no possibility of a detour, the only solution was to build a new tunnel. Construction, which will take ten months, will begin as soon as the contract can be let on bids. The new 2,850-foot tunnel will be about 50 feet shorter than the old one, built 10 years ago.

### TRUCK-BOAT PLAN FAILS

A summer's effort to save gasoline and truck tires, by boat transport of intercity trucks and trailers across Lake Erie, wound up in failure at the end of October. The Truckers Steamship Co. announced it was unable to operate profitably on the water route between Detroit and Cleveland.

The venture was ill-starred from the beginning. When service began June 1 after a series of delays (BW-June 12, p18), the first boats moved empty, because the A.F.L. Teamsters Union refused to allow its men to load the freighters without new pay scales.

But the Office of Defense Transportation and the Interstate Commerce Commission backed the plan to the extent that the union came to grudging terms and permitted movement of initial cargo goes June 15. Continued union opposition finally resulted in compromise quotas for shipment by boat; shipping sources in Detroit said the deal provided only enough business for one of the two boats. Late summer operations were further impaired by unseasonable weather.

Discouraged, the steamship company notified the state highway commission to repossess the two car ferries which had been leased for the cargo transportation. Troy Browning, Truckers Steamship president, indicated no effort would be made to reestablish the line.

## New Trade Waters Charted

Middle East's potential market of 100,000,000 consumers offers postwar challenge to business; MESC, the Anglo-American answer, may well be applied in other underdeveloped regions.

Many an American thought James Landis was being politically sidelined when he was sent to Cairo a few years ago to represent the United States in all economic matters in the Middle East. But a little group of international experts which has been watching recent developments at that ancient crossroads of the world has a different view. To it, the appointment is another indication that important conferences—probably leading up to vital postwar decisions—are in the offing in the Middle East.

**Economically Backward**—There are 100,000,000 people in what is usually labeled the Near and Middle East. But because they are split up into more than a dozen separate and not specially friendly states, are blessed with no abundance of any natural resource except oil, and are—for the most part—cursed with an extremely hot climate and an almost complete lack of rainfall, they are economically backward.

And yet, in the last two wars, their vital lines of communication (centering on Suez but including the Persian Corridor to Russia)

have played such vital roles that a startling new interest in their future has suddenly developed.

• **Oil Reserves Eyed**—Britain's interest actually dates back to the founding of the trade route to India and the Orient. But since the last war, it has been greatly intensified by the importance of the oil reserves in Iran which have been developed by a British government-controlled company to fuel the fleet in the eastern Mediterranean and the Indian Ocean.

American interest was insignificant until the last few years when United States oil companies secured large concessions along the Persian Gulf and across Arabia, and progressive American shipping companies carefully nursed a trickle of trade around the Mediterranean and in Black Sea ports.

• **War Changes Focus**—But the present war has radically altered the picture.

With United States' domestic reserves estimated by petroleum authorities at no more than twelve years' supply at the present rate of consumption, the huge Middle Eastern fields which stretch in a great arc around the Persian Gulf take on a vital new importance from the point of view of both

### LESSONS TO BE LEARNED

British dominance of the Middle East Supply Center, often criticized in United States export circles, may be explained by Britain's long supremacy in trade around the crossroad of the world that is Suez. Moreover, it is at least partly counterbalanced by American dominance in the parallel setup for North Africa.

Primary objective of these supply centers is to develop backward areas. Far surpassing the advantage of any temporary quid pro quo in their operation is the insight Americans are gaining into their possible application to trade development elsewhere—as in Latin America. These are the conclusions of Business Week's foreign editor, recently returned from his tour of Britain, the Mediterranean, and the Near East during which he watched the Middle East and North Africa agencies at work.

postwar trade and long-time defense.

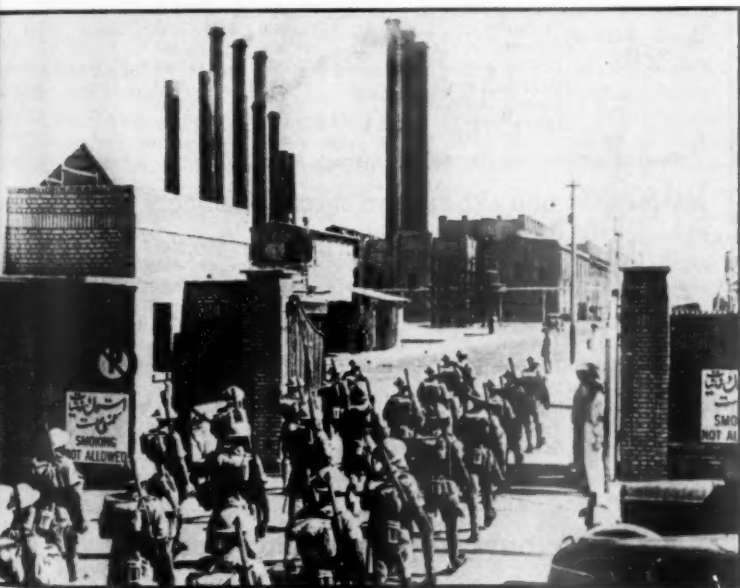
Experts declare they contain more oil than the total remaining reserves of the United States. Vast new wells of the Standard Oil Co. of California and the Texas Co.—which share the concession—have been sunk in the last few years, and the huge British refineries of the Anglo-Iranian Oil Co. at Abadan, Iran, are gradually being supplemented by American refineries at Bahrain Island, along the Arabian coast.

• **Russian Interest Aroused**—The really startling development, however, is the new Soviet interest in this backward and underdeveloped part of the world, and the probability that this area—rather than eastern Europe or the Far East—will be the real testing ground of the ability of the Big Three of the United Nations to work together effectively after the war.

Within the past two weeks, the Soviet Union and Egypt have established formal diplomatic relations with the arrival of their respective ministers in Cairo and Moscow.

As long ago as last summer, Russia was admitted to the Mediterranean Commission, and insisted that France also be allowed to participate (BW—Nov. 6 '43, p14). Though this commission, since the Moscow conference, is but part of a larger European Commission with headquarters in London, it already is confronted with major issues on which Russia has strong feelings.

• **King's Future in Doubt**—Is Greece, for example, going to be allowed to reject a return of the king and the government-in-exile? Britain has steadily backed the king, but Moscow vigorously



British troops mount guard over the world's largest oil refinery—the British-controlled Abadan works in Iran. In nearby Arabia, the Caltex oil concession presents the only important economic stake the U. S. has in the Middle East.

# MARCHANT

## First

### WITH

## ELECTRIC CARRIAGE SHIFT KEYS

(One of many Marchant "Firsts")



*The Art of Calculating  
as advanced by Marchant*

Electric power shift keys to control movement of a calculator carriage were first introduced by Marchant over 16 years ago.

... Before MARCHANT introduced ELECTRIC CARRIAGE SHIFT KEYS it was necessary—many times during each multiplication—to move a lever or hand-crank to shift the carriage to the next operating position.

By contrast, the Marchant Electric Carriage Shift spaces the carriage electrically by a touch on a Shift or Tab Key, or automatically as multiplication progresses.

Automatic Two-Way Carriage Shift is one of 20 Points of Superiority by which Marchant brings speed, accuracy and good nature to all calculator work.



Marchant Calculating Machine Company  
Home Office: Oakland 8, California, U. S. A.  
SALES AGENCIES AND MANUFACTURER'S  
SERVICE STATIONS GIVE SERVICE EVERYWHERE

supports the incipient rebellion within Greece against the old regime and the growing demands of the Greeks to be allowed a fresh start with a really democratic government.

• **Tito vs. Mihailovich**—What of Yugoslavia? Russia has backed Tito and his Partisans while Britain and the United States until recently supported only Mihailovich, King Peter's war minister.

Moscow insists it has no intention of forcing a communistic government on the Yugoslavs, despite its consistent and

vigorous opposition to King Peter's cabinet and their vague postwar reforms. Anglo-American policy persisted despite the Yugoslav people's Liberation Movement," launched some time ago by the Partisans, declared that its aims are "democratic rights and liberties" and the maintenance of "private property, with the opportunity for initiative in industry and the economic field."

• **The Arab Problem**—And what of the Pan-Arab movement which re-

## Pattern Set for Postwar Trade Bloc

To supply the eastern Mediterranean and the Middle East with the necessities of life when the war threatened to cut out all shipping, London created the Middle East Supply Center (MESC) at Cairo. Later, the United States became a junior partner.

Through the MESC, all civilian requirements have been so carefully sifted and local production so systematically stimulated that 1,500,000

tons of shipping were saved during the first two years of operation.

This pattern for wartime trade with a bloc of underdeveloped nations—a potential market of nearly 100,000,000 persons—may provide a pattern for postwar operation in other backward areas. Centralized handling of supplies could mean new outlets for many small manufacturers who could not otherwise tap the market.

<sup>1</sup> Allied Kingdom  
<sup>2</sup> British Mandate  
<sup>3</sup> British Crown Colony

<sup>4</sup> Republic under French Mandate  
<sup>5</sup> Anglo-Egyptian Condominium

<sup>6</sup> Occupied Enemy Territory  
<sup>7</sup> Allied Empire  
<sup>8</sup> French Colony  
<sup>9</sup> Allied Republic

Territories	Area (Sq. Miles)	Population
<b>MEMBERS BUYING AND SELLING THROUGH MESC</b>		
Egypt <sup>1</sup> .....	363,200	16,380,000
Palestine <sup>2</sup> .....	10,400	1,435,000
Mediterranean Group	Transjordan <sup>3</sup> .....	30,000 300,000
	Cyprus <sup>3</sup> .....	3,600 377,000
Persian Gulf Group	Syria <sup>4</sup> .....	73,000 3,600,000
	Lebanon <sup>4</sup> .....	4,000
	Iraq <sup>5</sup> .....	116,000 3,700,000
	Persia <sup>1</sup> .....	630,000 15,000,000
	Saudi Arabia <sup>1</sup> .....	927,000 6,500,000
South Eastern Group	Aden and Aden Protectorate <sup>6</sup> .....	112,080 648,000
	Sudan <sup>7</sup> .....	1,000,000 6,342,000
	Eritrea <sup>8</sup> .....	64,000 1,000,000
	Ethiopia <sup>7</sup> .....	350,000 5,500,000
	British Somaliland <sup>9</sup> ...	68,000 350,000
	French Somaliland <sup>9</sup> ...	9,000 70,000
	Libya <sup>8</sup> .....	810,000 1,000,000
Total of territory wholly supplied through MESC.....		4,570,280 62,202,000
<b>MEMBERS BUYING AND SELLING SPECIAL PRODUCTS THROUGH MESC</b>		
Turkey (for bulk food-stuffs) <sup>9</sup> .....	285,246	17,100,000
Malta (for supplies via E. Mediterranean) <sup>9</sup> ...	122	269,000 285,368 17,369,000
Total of consuming territories.....		4,855,648 79,571,000
<b>MEMBERS SELLING THROUGH MESC<sup>3, 6</sup></b>		
East African Group	Kenya.....	220,000 3,366,000
	Uganda.....	94,000 3,745,000
	Tanganyika.....	360,000 5,258,000
	Zanzibar.....	640 242,000
	Somalia.....	263,000 1,300,000 937,640 13,911,000
TOTAL.....		5,793,288 93,482,000

### COMPARATIVE AREAS AND POPULATION

U.S.S.R.....	8,176,000	170,000,000
United States.....	3,026,789	130,300,000
China.....	4,286,000	450,000,000
India.....	1,575,187	389,000,000
Europe (excluding U.S.S.R.)...	2,085,000	400,100,000



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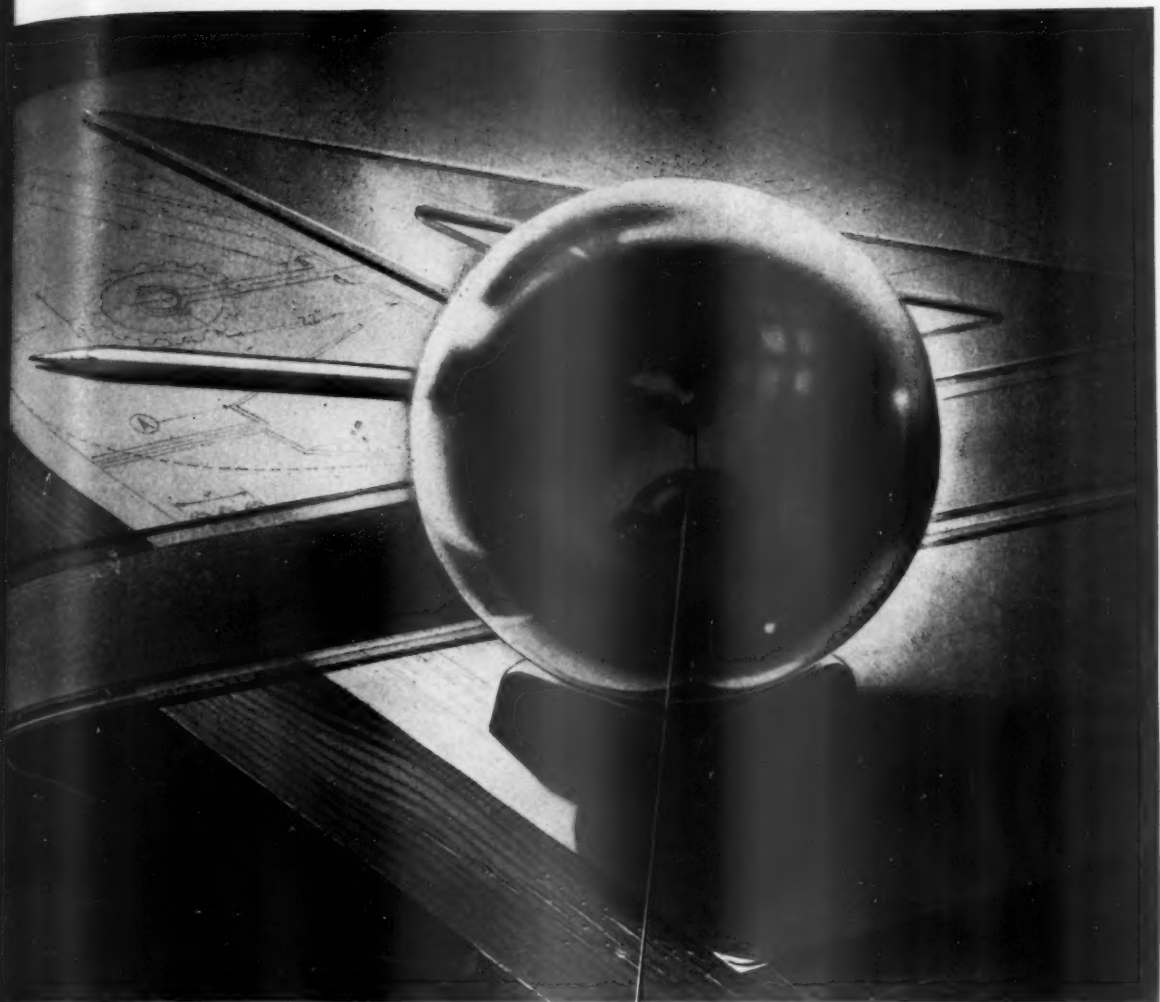
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## The Future begins with yesterday

There has been a lot of day-dreaming about the world of tomorrow, and how different it will be. But the best prediction of the future is provided by a review of the past, and the soundest guide as to how and where W·A·B Remote Controls can help you to boost tomorrow's production, and improve tomorrow's products, is found in the things the controls have done and are doing. W·A·B Remote Control Systems are working on production equipment in machine shops, mills and foundries, simplifying, lightening and fool-proofing such operations as loading, chucking, hold-down, molding, and feeding.

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**KAMERAD**... FELT hastens the Axis "Kamerad" of unconditional surrender. Motorized military equipment depends upon innumerable FELT parts for lubrication and smooth operation. Soldiers wearing respirators and gas masks with felt filters advance unharmed through battle fumes.

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**KEEPING** oil-thirsty machines happy... reducing shut-down time. FELT wicks provide constant lubrication at friction points. At slightest pressure, oil-filled FELT washers supply vital lubrication... lengthening life of ball and roller bearings.

**KILLS VIBRATION**... FELT protects aircraft precision instruments against vibration... dampens pounding which impedes accurate operation of industrial machinery.

**KNOWLEDGE**... American Felt Co. has long been a central source of information on all FELT grades... and applications. This knowledge is yours to share. Data sheets, samples and technical aid freely given.

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## American Felt Company

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PRODUCERS OF FINEST QUALITY FELT PARTS  
FOR OIL RETAINERS, WICKS, GREASE RETAINERS,  
DUST EXCLUDERS, GASKETS, PACKING; VIBRATION ISOLATING FELTS AND INSULATING FELTS



Producing stockings at Tel-Aviv, Lodzia Textile Co. is typical of Palestine small but modern manufacturing plants. On such factories, the Middle East Supply Center based its self-help program during the Mediterranean blockade.

flowers into action when world tensions stress the need for strong cooperative action? Do Russia's new ties with Egypt mean that Moscow intends to back the present resurgence of Pan-Arabism? Egypt and Iraq initiated the recent discussions, and Saudi Arabia—the most purely Arab state of them all—is supporting the movement.

It was into this highly charged international political atmosphere that Landis was plunged less than two months ago. What must be recognized by business leaders is the fact that behind this political front—and forming the basis for much of the maneuvering—are economic problems of great complexity. Landis' first job is to help solve the problems.

If the Middle East is to know the real meaning of "freedom from want," the whole economic system of each country will need to be overhauled, modernized, and well lubricated with capital, machinery, and technical aid from the outside world.

• **Coordination Imperative**—If there is to be political stability in this area, this economic development must be handled on an international basis, but with a full and specific assignment of responsibility for particular sections of the work, and a time schedule—perhaps a series of five-year plans—laid down for the development of each region each year.

And finally, the Middle Eastern nations themselves must be rigidly held to certain schedules of self-help and internal economic improvement, or the effort will fail.

• **Big Investment Already**—What few Americans realize is that an important Anglo-American beginning has already been made on this problem of economic organization, and that the United States had, up to July, invested \$1,000,000,000

in the area, that it is operating a complete rail and truck transportation system in Persia (BW—Oct. 30/43) and is responsible for a system of transport (Army Transport Command) which crisscrosses the whole region, handles 90% of the air-borne traffic.

It was in the spring of 1941, just before Germany attacked Yugoslavia and Greece, that London, faced with the need of maintaining a flow of supplies and civilian goods to the Middle East despite a shortage of ships, created the Middle East Supply Center (MESC).

• **British Enterprise**—It was created as part of the Ministry of Shipping, was entirely a British enterprise for more than a year before Washington sent its own civilian representatives to help. It praised the need for supplies and their distribution. By the time it arrived in Cairo last October, there were 135 Englishmen on the staff of MESC and 43 Americans.

Though it was fundamentally a problem of supplying Greece's requirements which led to the formation of the center in 1941, the serious of the war later that spring cut it out of the picture and led eventually to the inclusion of more than two dozen countries (table, page 48).

• **The Objectives**—From the MESC has had three main objectives:

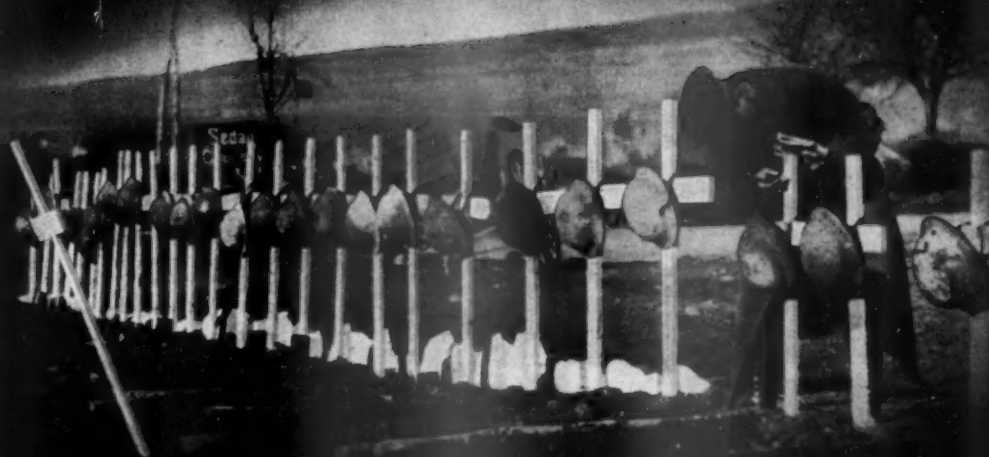
(1) To develop local production of commodities indispensable to the war effort of the Middle East.

(2) To assess and assist the essential import requirements of the area.

(3) To establish an effective system of import control in order to eliminate essential imports.

• **Needs Surveyed**—When the first representatives of the Ministry of Shipping

AMERICANS KILLED NOVEMBER 11, 1918



## The men who could have been saved

**WILL WE MAKE** the same mistake we made in 1917..?

It is common knowledge that, in the First World War there were industrial slow downs, and that these slow downs needlessly added to the length of the war. Looking backward now, we can soberly measure the cost of these hours . . . days . . . perhaps even months of fighting we could have been spared.

The measure is this: that in the last ten minutes alone, of World War I, more than 4,000 men were killed. More than 400 a minute who might have been saved, had the war not been prolonged.

Could there ever be a reason clearer, starker, why we must not allow lags in industrial production today - why we must not allow slow downs to postpone victory for a single, tragic minute?

Unfortunately, there are many causes for decreased

production that can be neither foreseen nor forestalled. These we must accept as the price of war. But there are others which we *can* foresee, and *can* prevent.

One kind of slow down we can and should prevent is caused by valve failure. The way to do it is to prevent valve trouble *before it starts*.

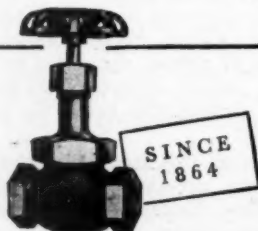
Inspect valves frequently, regularly. Repair or replace worn parts before valves destroy themselves. Instruct maintenance men thoroughly . . . and when new valves are installed make sure they are selected and installed by experts. These simple rules may contribute more than you know, to help to shorten the war.

Jenkins Engineers are ready to assist any management in developing an effective program of valve conservation.

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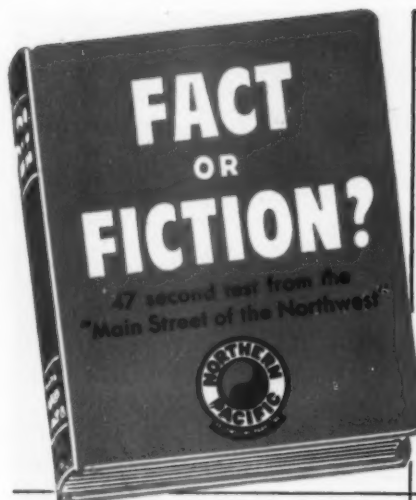
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## JENKINS VALVES

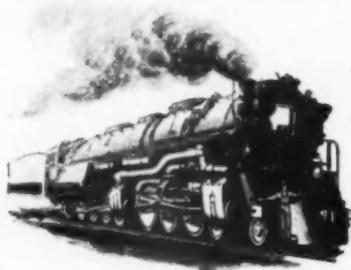
*For every industrial, engineering, marine and power plant service . . . in Bronze, Iron, Cast Steel and Corrosion-Resisting Alloys . . . 125 to 600 lbs. pressure.*





**Q.** Cutting Christmas trees wastes nation's lumber. Fact or fiction?

**A.** Fiction. Government supervised cutting aids growth of merchantable timber. Each year 1,500,000 firs go to market over the "Main Street of the Northwest."



**Q.** 4-6-6-4 is wartime code for army freight. Fact or fiction?

**A.** Fiction. It explains how 20 wheels are grouped under giant freight locomotives now speeding vital war supplies over the Northern Pacific Railway.



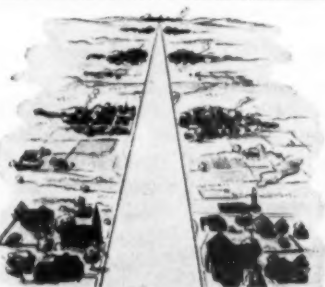
**Q.** Army troops store food in Alaskan glaciers. Fact or fiction?

**A.** Fact. Into these "refrigerators" go frozen foods from Oregon and Washington plants which last year shipped 48,000,000 pounds via Northern Pacific.



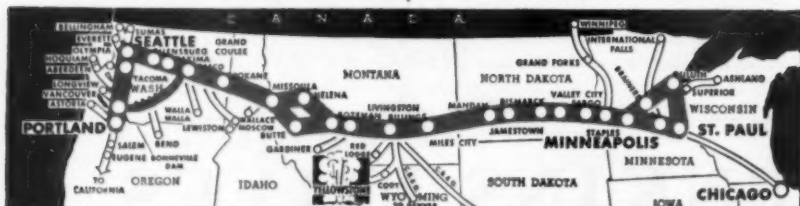
**Q.** "Bread basket" is boxers' slang for solar plexus. Fact or fiction?

**A.** Fact. But, more important, "Bread basket" means Northwest states which in 1943 shipped wheat for 16 billion slices of bread via Northern Pacific Railway.



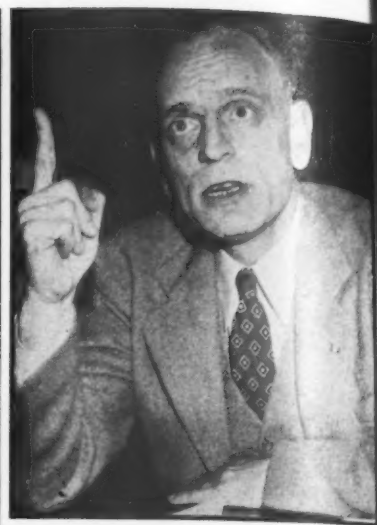
**Q.** There is one "Main Street" in the Northwest that is 1,904 miles long. Fact or fiction?

**A.** Fact. It's the Northern Pacific Railway, known as the "Main Street of the Northwest" because it links more of the Northwest's important populous centers.



# NORTHERN PACIFIC

MAIN STREET OF THE NORTHWEST



All American economic interests in the Middle East are now under the eye of James M. Landis, Washington's former director of the Office of Civilian Defense.

arrived in Cairo from London, they were mainly concerned with the problem of determining how much wheat or flour was necessary to maintain minimum bread supplies in Greece.

As soon as this estimate was completed, the job of procuring the wheat was turned over to the United Kingdom Commercial Corp. (UKCC), because MESC had no authority and no funds with which to handle any actual purchases. But as soon as the wheat was bought by the UKCC, MESC arranged shipping space and saw to it that the wheat was delivered to the proper authorities in Greece, and later in all other countries which now draw on the MESC pool.

In no case does the center handle the final distribution. That is left to whatever business group is specified in the country involved. Major MESC principle is to operate as far as possible through normal private channels.

● **System Extended**—The general pattern developed in the case of wheat and flour is now used in handling 1,300 items. Major imports—those imported in such large quantities that the business is centrally pooled by MESC—are tea, coffee, oilseeds, sugar, all cereals, newsprint, iron and steel, and pharmaceuticals. Cereal imports alone, in the 1941-42 season, amounted to 600,000 tons, though imports of all kinds have been slashed 80% below the peacetime normal.

Not all this reduction represents an absolute cut in food and equipment supplies. Under MESC guidance and encouragement, Egypt, for example, slashed its cotton acreage from 1,700,000 to 700,000, and turned most of the

feed fields to the growing of wheat, barley, and rice. Although these crops are far inferior economically in normal times, this helped Egypt to solve the problem of a cotton surplus for which there was no transportation to normal export markets, and filled most of the country's home demand. And, because wheat grows (at least temporarily) without the extensive fertilizing that Egypt's cotton fields demand, nitrate imports were cut out entirely.

• **Sudan Increases Wheat**—The Anglo-Egyptian Sudan, in a great wartime drive, boosted its wheat production 20,000 tons, making the country virtually self-sufficient. And when the crop matured faster than expected due to an early spring, MESC helped overworked farmers to borrow threshing equipment from Palestine.

Palestine, with huge citrus groves but no market for fruit because of the shipping shortage, was encouraged to cut down its oldest groves and turn the acreage into vegetables or wheat for local consumption.

• **Planted Acreage Grows**—Syria, with big irrigation projects partially developed, managed to boost the area devoted to farm crops nearly 15,000 acres in 1943, and the country plans to bring another 50,000 acres under cultivation in the next few years.

Ethiopia unexpectedly helped solve the farm machinery problem. When this Italian colony fell to the British, it was found to be fairly well stocked with modern farm equipment (Italy was more successful in the agricultural than in the political development of its colonies), including 400 tractors which are gradually being shifted to parts of the Middle East where they will do the most good.

• **Jealousies Are a Hindrance**—Despite the adjustments which each country has made, the traditional national jealousies of the region and the weak economic control which most of the governments have over their countries have made it difficult to put many practical proposals into operation.

Egypt, for instance, had a sugar surplus during the first two critical years, but local hoarding was so generally practiced that supplies for other areas had to be imported from Mauritius, despite the desperate shortage of shipping space.

And Iraq, with its great date groves at the mouth of the Euphrates, has failed to cooperate completely in filling needs in other countries because growers held out for higher prices, and Syria and the Lebanon refused to commit themselves in advance for the quantities their countries needed.

• **No Local Industry**—One reason Britain found it so difficult to organize resistance to the Axis in the Middle East during the early years of the war was the absence of any local industry capable of producing war supplies or helping



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★ A recent survey among Buell users—companies that have had their Buell Dust Recovery Systems in operation for three, four, five, or more years—brought to light a remarkable record for long life and trouble-free performance, freedom from clogging and absence of repairs.

The high efficiency and other *plus* advantages of Buell Dust Recovery Systems are the result of Buell's exclusive van Tongeren design. The van Tongeren "shave-off," for instance, makes possible a high recovery efficiency without resort to small-diameter cyclones. At the same time, the large diameter of Buell cyclones permits construction of extra-heavy metal and reduces abrasive wear—two important factors in the proved long life and low maintenance cost of Buell equipment.

In addition, large diameters permit Buell cyclones to be designed with large outlet openings that virtually eliminate clogging and do away with the necessity for constant supervision.

Buell Dust Recovery Systems are used for the reclamation of valuable dusts and the abatement of hazardous dust nuisances by leading companies in every branch of industry.

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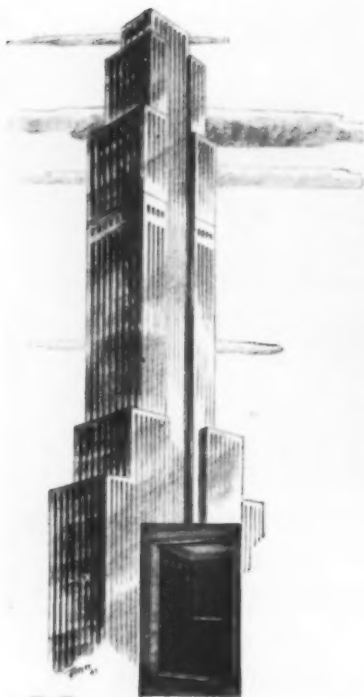
AMERICAN POTASH & CHEMICAL CORP.  
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BUICK MOTOR CAR COMPANY  
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CONTINENTAL BAKING CO.  
CURTIS-WRIGHT CORP.  
THE DETROIT EDISON CO.  
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THE DOW CHEMICAL CO.  
E. I. DU PONT DE NEMOURS & CO., INC.  
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BUY WAR BONDS AND MAKE THE AXIS BITE THE DUST

The War—and Business Abroad • 53



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**MONTGOMERY MANUFACTURES** a complete line of passenger and freight elevators, electric dumbwaiters and special equipment for vertical transportation.

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By encouraging wholesale conversion of Egypt's cotton acreage to wheat and grains, the Middle East Supply Center eased acute food and shipping problems.

to meet civilian demands for normal imported goods.

There is no iron and steel industry in the whole area. All railroad equipment is ordinarily imported. So are trucks, heavy machinery, repair parts, communications supplies, and most drugs and textiles.

• **Start Has Been Made**—The war moved too rapidly for the Middle East to change into an important supplying area—except for oil. But in a few lines, certain countries have made important contributions and have started small industries which may grow in peacetime.

Egypt is learning to dehydrate food. Results so far have been mediocre, but business leaders—aware of the ready market for such products in hot regions with little refrigeration—are actively planning to expand.

Palestine is able to produce aluminum sulphate at the rate of 2,000 tons a year, and has developed a local soap industry which has helped alleviate the wartime shortage in Iraq.

Tripoli has developed a brewery which, with imported ingredients, should be able to meet the total requirements of the troops in the eastern Mediterranean next year.

A cement factory at Haifa now turns out 21,000 tons a month, while new factories making acetic acid, carbon black, chromic acid, iodine, sulphur dioxide, and paperboard have given Palestine an important start as a manufacturing center for the Middle East.

When U. S. Army headquarters in the Middle East appealed to the center for aid in finding a local manufacturer who could turn out 500,000 four-ounce chocolate bars for Army PX stores across North Africa, an Egyptian manufacturer was located and the order was filled in four days.

• **Shipping Pool Likely**—The worst crisis in the Middle East passed with the reopening of the supply route through the Mediterranean last May, but the shortage of ships is likely to make it necessary for several years to

pool much of the bulk trade of the region.

Certainly the center's systematic program of estimating the requirements of the whole area for 1,300 important trade items has helped to keep key industries in operation and to meet the most urgent requirements of the population.

• **Americans Outnumbered**—Though Americans have protested bitterly at home because the British outnumber Americans more than 3 to 1 in MESC, and claimed that the shrewd British exporter has managed to keep his private trade lines alive through the cooperative efforts of the all-British UKCC, critics admit that in the parallel setup in North Africa (BW—Aug. 28 '43, p. 15), the positions are reversed.

Further, there is no doubt that the British are far more intimately acquainted with business leaders and methods of doing business in this part of the world than Americans.

• **MESC Cuts Pattern**—What is far more important is the possibility that MESC provides a pattern for doing business in many backward parts of the world where the market, at present, is too small for most private businesses to develop their own outlets.

If this is the case, there will be other regions—as the Caribbean area, or South America—where the United States might be the dominant partner, but where Britain and the United States could profitably share the responsibility for carrying out the sanitation, transportation, public health, and education projects which must precede any large-scale development of new markets and better living standards.

• **Argument for Cooperation**—Finally, the entrance of Russia into the postwar



diplomatic and economic planning for the Middle East raises another argument for the kind of cooperative action suggested by the MESC.

Nothing in the plan of the organization shuts out any other major power. Perhaps it will be easier to avoid a clash between the economic systems and political patterns of such different politico-economic philosophies as the Russian and the Anglo-American if they work at first through some such established, centralized channel at MESC.

## CANADA

### Shift to Peace?

With peak of war output past, the Dominion is releasing the brakes on civilian operations and shaping peacetime laws.

OTTAWA—Canada should be as well as the front in reconversion as it has been in four years of war effort. Officials and business men believe that the country has passed the peak of war production and that capacity is becoming available for resumption of civilian operations.

**Changeover Begun**—The process has already started (BW—Nov. 27'43, p47). It was signaled in two ways last week: by the return of key war control officials from Ottawa to private business; by release of raw materials for consumer production.

Just when Minister C. D. Howe's Commissions & Supply Dept. revealed that the current rate of war production was at its highest level, three top-flight war controllers, including Henry Borden, chairman of the War Industries Control Board, were released to return to private enterprise.

At the same time restrictions were removed from the use of steel and aluminum scrap.

**Following Business View**—Ottawa is starting to follow the views of business in the changeover. Within a few days, government-owned company will be set up to control disposal of surplus war supplies (BW—Nov. 20'43, p44). Official action to prevent flooding of the civilian market with war goods has been a chief demand of the Canadian Manufacturers' Association and other business bodies.

Preparations for reconversions are being made in legislation now being introduced for the session of Parliament opening in January. A new labor code will aim at stability among industrial workers (BW—Nov. 27'43, p44). Social security measures are proposed to assure Canadians that they are going to win the

### DOMINION'S WAR STAKE

Current figures on Canadian war output suppress some items for security reasons but show a total of over \$5,000,000,000 for the four years ended last Sept. 15.

Production included 620 cargo, escort, and patrol ships; 9,000 aircraft; over half a million motor vehicles; about 30,000 armored fighting vehicles; more than 60,000 guns and 750,000 small arms; 42 million rounds of heavy ammunition and 2½ billion rounds of small arms ammunition; nearly 1,000,000 tons of chemicals and explosives; \$250,000,000 of instruments and signaling equipment.

In food supplies, the Dominion sent Britain 1,000,000 tons of pork products, 200,000 tons of cheese, 130,000,000 tins of evaporated milk, and 85,000,000 doz. eggs.

peace as well as the war. The 1944-45 budget now being drawn by Finance Minister J. L. Ilsley for submission to Parliament probably in February is expected to permit a reduction of taxes.

Canadian leaders agree that the stiffest part of the job of beating Germany into submission is still ahead. They frown on relaxation of effort, but they believe the stage has been reached when peace planning can be started, and a special ministry of postwar reconstruction set up.

• **Fight Brewing**—A parliamentary and political fight is shaping on methods and timing of war controls relaxation. The Mackenzie King administration shows signs of planning to drop control gradually. John Bracken's Progressive Conservative Party is starting to campaign for the full freeing of private enterprise as soon as fighting ends.

### WHEAT CURBS TO DROP

A conference of Canadian federal and provincial agricultural officials this month is expected to end restrictions on wheat acreage. Canada entered the war with a wheat carryover, but this year's low harvest relieved the storage situation and gave rise to new worry about contracts for supply of flour to United Nations under Ottawa's Mutual Aid Plan.

Canadian flour mills are operating at capacity in production for Russia, and the strain on elevators is being lessened. As the shipping situation eases, large quantities of Canadian flour will go to Europe and China. Mutual Aid officers believe that within two years Canada will be offering inducements for increasing wheat production.

# What

## does the

### phenomenal growth of savings

## mean to you?



Between the beginning of 1941 and the end of March, 1943, individuals, unincorporated businesses, nonfinancial corporations, and state and local governments increased their holdings of cash, bank deposits, and government securities and reduced their short-term indebtedness by 40 billion dollars," says Sumner H. Slichter. "Next to the spectacular increase in production, this rapid piling up of liquid assets is the most noteworthy economic development of the time."

As a framework of reference in considering many postwar policies, he has analyzed this trend and its probable projection for the next three years, with conclusions of vital interest to you, in his new book.

## PRESENT SAVINGS AND POSTWAR MARKETS

By SUMNER H. SLICHTER

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Here is a wholly independent and unbiased approach to economic developments of tomorrow as they may affect business . . . your business. Professor Slichter examines in detail the unprecedented growth of savings, its present and probable future rate, the underlying factors, and the influence on many timely questions.

What is the volume of savings likely to be when the transition to a peacetime basis begins to take place?  
Will these funds be an inflationary threat?  
Will they have any effect on reconversion financing?  
How will they affect the demand for goods?  
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These and many related questions may be approached more rationally against the background of careful, reasoned analysis given in this book. The author compiles a thorough and practical framework of figures. In addition he offers his own comments on the significant trends disclosed.

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# PRODUCTION

## Ether Unshackled

Florida scientist, though he has no complete test model, feels he has licked television's horizon, wave-band problems.

Dr. Palmer H. Craig, head of the University of Florida's department of electrical engineering, visited New York this week for the express purpose of publicizing his new system of television, arranging a press conference at the Yale Club.

• **Claims Still Untested**—He has never built a complete transmitter or receiver embodying the "Craig System," but as a result of the publicity which announcement of his new process secured, engineers and laymen alike were wishing this week that some big electrical manufacturer would immediately put together the necessary equipment and that the Federal Communications Commission would allocate the ether bands necessary to test five startling claims:

(1) The Craig System is not limited to the horizon in range but will go to any distance that a standard sound broadcast will go.

(2) It will operate on low light intensi-

ties, "will transmit moonlight scenes—anything you can see with your eyes."

(3) It requires a wave band not much wider than a standard audio broadcast band—only a fraction the size of the band used in present television systems—hence there will be more room in the spectrum for radio telephony and other electronic developments of the future.

(4) It will permit standard radio stations to convert to television quickly after the war.

(5) Home television receivers for Craig reception will be "considerably, not radically, cheaper."

• **Good Reasons for Haste**—With FCC and the Radio Technical Planning Board working on television channel allocations, the need for an early test of any new system and a forthright yes or no from competent engineers and artists acquires special urgency lest television's future be frozen irretrievably into present molds and proposed assignments of wave bands.

Dr. Craig is no newcomer to the field of electronics; he has more than a score of important U. S. patents covering phases of the electric and electronic art.

He merely states that he has worked on his invention for over ten years, has checked each component by actual test or by mathematical analysis, and that

they ought to work together as claims.

• **Expense a Small Factor**—What he proposes is a new type of transmitter that will not scan successive bits of particular scene or action at a time, but will put the whole thing on the air once through a combination of lens, photoelectric screen, and other apparatus too technical for the lay mind. (The first experimental transmitter and equipment may cost as much as \$50,000, but its wide broadcasting range promises to limit the need for a great many duplicates.)

His new television receiver will be equipped with a "crystal filter," described as an "electro-mechanical transformer," the duty of which will be to unscramble the lights and shadows of the television image so that it can be scanned by more or less orthodox apparatus and made visible on the fluorescent screen of a standard cathode ray tube.

He believes that existing receivers can be converted to his system without undue expense, that future receivers can be considerably simpler.

• **Mixup Up to FCC**—Since his system operates by amplitude modulation—standard long-wave broadcasting does not—Craig recognizes that its adoption would upset the FCC's plans for allocating frequencies in the short end of the radio spectrum for television which is now on an f-m, or frequency modulation, basis.

## Ethyl From Wood

Sugar, percolated from sawdust under German patents, made available by APC, seen as industrial alcohol source.

Lumber-producing states and the lumber industry see hopes of a new source of revenue in an improved hydrolysis process for percolating wood sugar from coniferous wood waste. Previous methods allowed the sugar to decompose before it could be removed.

Germany has (or had) 22 such plants; both Japan and Italy bought licenses to use the Scholler patents in 1939. The patents now have been made available to U. S. plants by the Alien Property Custodian.

• **Could Start, If**—U. S. Forest Products Laboratory technicians now assert that we could have wood-sugar plants in operation within a year, and that these could turn out high-grade ethyl alcohol at 20¢ a gallon under certain conditions. WPB's Chemical Division, however, shows no disposition to act at this late date.

Alcohol from grain is now costing the government an average of \$1 a gallon; the wood-sugar advocates argue, and



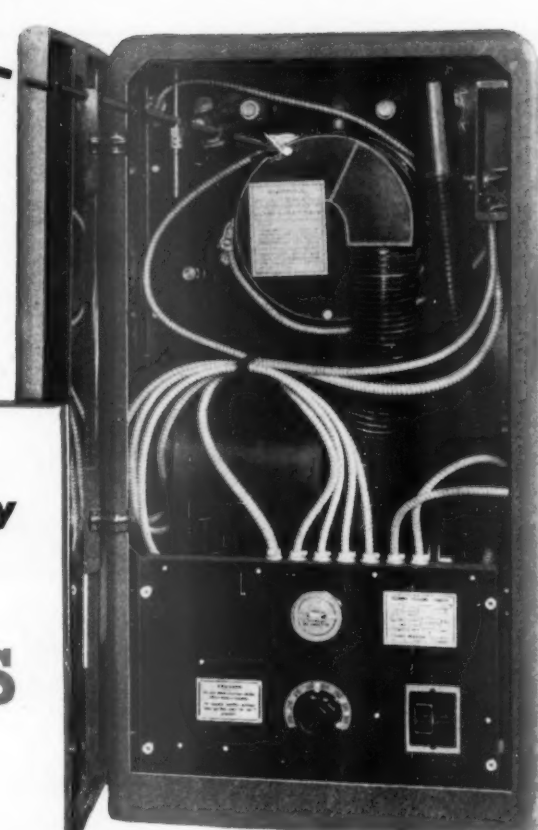
## PAPER FROM PINE

Once believed impossible, newsprint production from Southern pine will soon be greatly expanded and integrated at Lufkin, Tex. There Southland Paper Mills, Inc., starts its new sulphate pulp facilities this month at the plant (above) where the first American newsprint was made from common yellow pine (BW—Jun.10

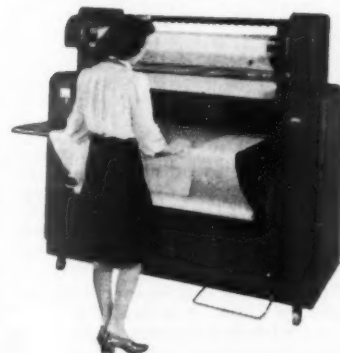
'39,p35). The \$3,000,000 addition to the original \$7,000,000 mill will boost daily production from 165 tons to 3,300 tons and will eliminate outside purchases of sulphate pulp. Located in the heart of Texas pine country, Southland uses 85% ground wood pulp and 18% chemical pulp (3% becomes waste liquor). Chattanooga, Tenn., boasts the only other domestic newsprint mill in the country.



Thumb screw holds down plate and actuates Micro Switch



Exposed left side of Model 75 Bruning Printer showing location of Micro Switch. A second Micro Switch is on the right side.



BUY ALL THE BONDS YOU CAN

The basic Micro Switch is a thumb-size, feather-light plastic enclosed precision snap-action switch that operates on force differentials as low as 1/4 ounce and movement differentials as low as .0002". It is listed by the Underwriters' Laboratories with ratings of 1200 V.A. loads from 125 to 460 volts A.C. It can be supplied in a wide variety of housings and a broad range of actuating mechanisms.

**Charles Bruning Company**

**Uses Two**

**MICRO SWITCHES**

**on Bruning Printers**

**TO PROVIDE UTMOST PROTECTION  
TO OPERATOR**



Complete protection to the operator of Charles Bruning Company's Printer is provided by the use of two Micro Switches which auto-

matically disconnect the power to the quartz lamp before the end plates, which shield it, are removed.

Bruning Printers and Developers, which produce black and white prints, are the product of a company which takes pride in the modern, compact design of their equipment. The thumb-size, feather-weight Micro Switch was a natural complement to such a design.

Plates shielding this lamp in the Bruning Printer are held in place on each side of the machine by thumb screws. Should anyone remove a plate before the control switch has been turned off, the Micro Switch disconnects power to the quartz lamp.

This use of Micro Switch by the Charles Bruning Company is typical of the varied applications to which this small, compact precision switch is being used universally in industry.

Micro Switch's long life and dependability, its flexibility in meeting the ever-changing demands in precision switching requirements, have made it the outstanding precision snap-action switch. Close cooperation on design problems with our customers today makes Micro Switch available in 2,422 different combinations of electrical characteristics, housings and actuators.

Your engineers now engaged in present designing, or working on post war products, should be fully informed on Micro Switch. We will send as many Micro Switch hand-book-catalogs as your engineering department may require.

Micro Switch Corporation, Freeport, Illinois • Branches: 43 East Ohio Street, Chicago (11)  
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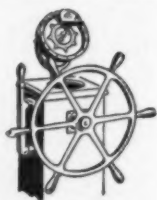
The trademark MICRO SWITCH is our property and identifies switches made by Micro Switch Corporation

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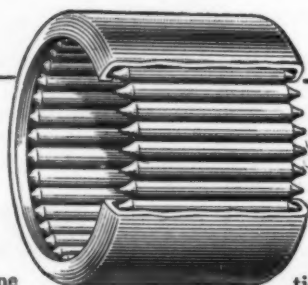
**MICRO SWITCH**

**Made Only By Micro Switch Corporation ... Freeport, Illinois, U. S. A.**





# What's this Gyro-Pilot got that may make Sewing Machines lighter and *longer lasting?*



IT'S BUSIER than ever these war days in Marine Gyro-Pilots, helping our "bridge of ships" to steer automatically with greater accuracy. With Peace, the same bearing which helps in the Gyro-Pilot may be found in new-designed sewing machines—one of the reasons they will be smarter-looking, more compact, and require less attention. It's the Torrington Needle Bearing.

And that's only one instance—there are scores of ways in which this unique anti-friction bearing may contribute, in postwar, to improvement in product designs and performance. It should make the next baby carriage you buy easier to handle... your washing machine less expensive to own and operate... your office machines more compact in design and lower in cost.

Meantime, all the bearings that Torrington can produce, even with expanded capacity, are serving for

such wartime applications as Marine Gyro-Pilots.

But with Victory and Peace, America will become increasingly familiar with the Needle Bearing's advantages, for you're going to find it in a surprising number of the new-day things you buy.

## THE TORRINGTON COMPANY

Established 1866 • Torrington, Conn. • South Bend 21, Ind.  
Makers of Needle Bearings and Needle Bearing Rollers  
New York Boston Philadelphia Detroit  
Cleveland Seattle Chicago San Francisco  
Los Angeles Toronto London, England

## A WORD TO MANUFACTURERS OF PRODUCTS that use bearings:

Investigate the possibilities for improving your postwar designs through such unique-with-the-Needle-Bearing features as:

1. Small size
2. Light weight
3. High load capacity
4. Efficient lubrication
5. Ease of installation
6. Low cost

Preliminary information on types, sizes and ratings, and a list of typical Needle Bearing applications will be found in Catalog No. 121. Write for copy today.

ALWAYS REMEMBER TO ASK:  
DOES IT HAVE

# TORRINGTON *NEEDLE* BEARINGS

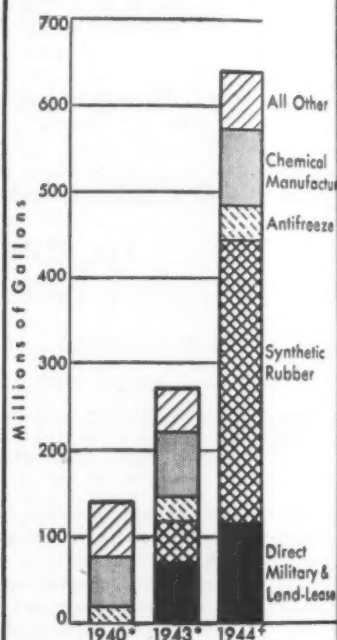


grain is vitally needed for animals humans. Alcohol needs for 1944 munitions, synthetic rubber, plastic and other war goods) are 640,000 gal.

● **Pilot Plant's Record**—WPB's Office Production Research & Development and the Forest Products Laboratory set up a pilot plant last June at Marquette, Mich., to experiment with the Schoeller process. It is making 1,000 lb. of sugar from a ton of dry wood per day, which is enough to produce 50 gal. alcohol.

Operating under a contract with OPRD to do the process designing commercial scale plants, the Vint Copper & Supply Co., Cincinnati, almost completed the engineering work and by Christmas expects to have definite figures on costs and equipment needs. Timber Engineering Co., Washington, D. C., affiliated with National Lumber Manufacturers Assn.

## ALCOHOL NEEDS SOAR



\*fiscal year ended June 30  
†calendar year, total and synthetic rubber official statistics, other 1944 figures Business Week estimate  
Data: War Production Board. © BUSINESS WEEK

One big argument in favor of the construction of alcohol-from-wood facilities is the huge need for ethyl alcohol in 1944. More than half—330,000 gal. out of 640,000,000—will be used in the production of synthetic rubber. Total demand will be 50,000,000 gal. higher than estimated production even with beverage distilleries converted 100% to industrial alcohol, that the none-too-large stockpile will be materially reduced.

is currently negotiating an agreement to furnish consulting service to OPRD.

• **Margin of Safety?**—At the outset, the proposed wood-sugar program would meet only a fraction of the total demand. Nevertheless, that fraction, the wood-sugar advocates argue, might be of strategic importance, especially if next year's grain crop is small and petroleum supply, which also is an important source of alcohol, gets tighter.

A wood-sugar plant with a capacity of 5,000,000 gal. a year might cost \$2,000,000. An unpleasant fact is that it would require steel plates—currently scarcest steel item.

• **Material-Saving Plan**—But Erwin Schaefer, a German refugee, former vice-president of American Wood Sugar Co., and now chemical research chief for Timber Engineering Co., has offered a scheme to save materials by reducing the 14-hour cycle of percolation to eleven hours in a plant using one-third the materials formerly required.

This would cut sugar output per cycle but not per 24 hours, he claims.

If lignin—also a product of the operation—is not considered, Schaefer declares the 5,000,000-gal. plant would produce alcohol at 20¢ a gal.; if lignin sells at 1¢ per lb. (current price is about 9¢), the alcohol would cost only 4¢ a gal. This is based on a ten-year plant amortized with interest at 5%.

• **Lignin Raises Hopes**—Lignin is a great unknown in chemistry today, a raw material full of promise for plastics. It is the substance binding cellulose fiber together. Germany is believed to be making phenol from lignin, with yields running as high as 30%.

Scholler lignin differs considerably from the lignin obtained in the waste sulfite liquor process of making alcohol, both chemically and physically. It resembles dry rotten wood. From each ton of wood used to make sugar, 500 lb. of byproduct lignin is obtained, but enthusiasts foresee a day when expanded uses for this little-known material will make it the chief product and alcohol a byproduct.

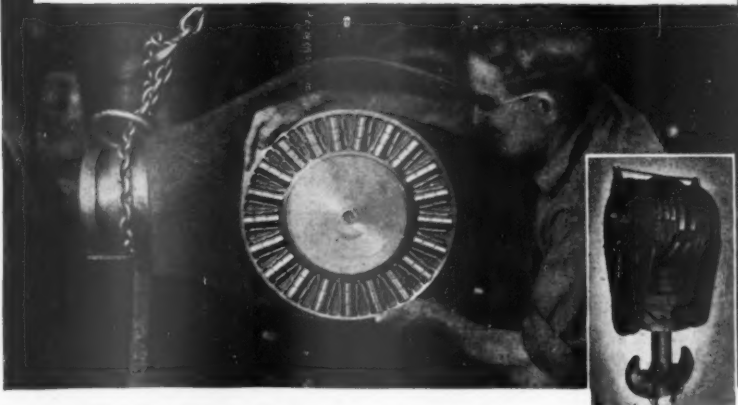
• **Old Process Dropped**—Two U. S. plants made ethyl alcohol from wood in 1917 and continued for two years after the armistice. They were privately financed, used what is called the old American process, got a yield less than half as great as by the Scholler technique, and failed to meet peacetime competition of molasses and grain. They were at Fullerton, La., and Georgetown, S. C., and made 6,000,000 gal. a year.

At Mechanicville, N. Y., a sulfite liquor plant failed about the same time, largely because it had five times the capacity of the sulfite then available.

• **Schaefer's Plant Seized**—In 1937-38, two new processes of getting wood sugar from waste wood (not sulfite liquor) attracted attention in the U. S. because

# IN THE NEWS

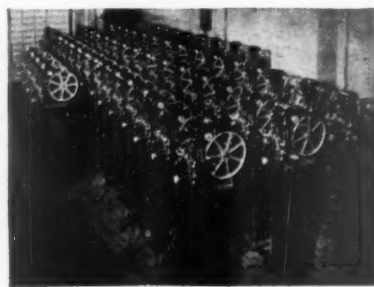
WITH TORRINGTON—BANTAM



LIKE A POLISHED JEWEL, this large Roller Thrust Bearing, measuring over a foot in diameter, enables the giant 5½-ton hook, shown in the inset, to rotate smoothly and safely, even when encumbered by its 150-ton capacity load. When the Shepard Niles Crane and Hoist Corporation custom-designed this load block, which is to hang from an overhead electric traveling crane in a West Coast shipyard, they selected a Torrington Roller Thrust Bearing with a capacity of 155 tons for the yoke. This is an excellent example of the ability Torrington engineers have to design and build bearings for new or unusual applications.



GRINDING OF GEARS AND WASHERS is done rapidly and accurately with this Rotary Surface Grinder. In the four-speed change gear mechanism for the drive to the magnetic chuck the Arter Grinding Machine Company has specified Type NCS Bearings with their compact design, high load capacity and ease of lubrication.



FILING SAW TEETH on hand, band and circular saws for the Army Air Corps is the destiny of these Automatic Saw Filers built by the Foley Manufacturing Company. The precise accuracy needed to obtain clean and sharp file cuts depends to a large extent upon the use of compact, high capacity Type NCS Bearings in this machine.

BECAUSE OF THEIR LIGHT WEIGHT, low friction coefficient and high lubricant capacity Needle Bearings find a variety of special applications. If you have a seemingly difficult bearing problem, it may be solved quickly and easily by reference to Torrington-Bantam's complete line of Needle Bearings of all types and sizes. Whatever your bearing problem. TURN TO TORRINGTON for expert engineering counsel.

  
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THE TORRINGTON COMPANY • BANTAM BEARINGS DIVISION  
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When the Nazis began to organize Germany for the present war, they seized Schaefer's plant at Tornesch (near Hamburg, and since bombed), and turned the place over to the Reichs Alkohol Monopol.

• **Changes in Industry**—Dr. J. Alfred Hall, principal biochemist of the Forest Service, says that percolators and distilleries using wood waste could operate so profitably after the war that a readjustment in our alcohol sources would become inevitable. Such a situation, he admits, would cause considerable anguish in the U. S. alcohol industry and, for a time, in West Indies sugar and molasses exporting groups.

About half of U. S. industrial alcohol is produced by five firms: du Pont, Union Carbide, Commercial Solvents, Publicker, and U. S. Industrial Chemicals, whose distilleries are mostly in the East. Wood-sugar advocates argue that their plants would disperse alcohol production to the forest states. In Oregon, for instance, is an area with a 20-year sawdust potential that would make 16,000,000 gal. yearly.

• **Waste Is Basic Material**—The Scholler patents cover utilization, for various purposes, of sawdust, hogged fuel, and other wood waste from needle-bearing trees. Most of this accumulates in mill yards, hence is not affected by the tight labor situation in the woods.



## WORKING BY PHONE

Work teams in noisy factories now maintain communication by using the same equipment as bomber crews. At Boeing Aircraft, for example, a riveter working on a fuselage (right) directs

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• **Advocates' Goals**—Wood-sugar backers visualize an industry that will supply the U. S. with alcohol, rubber, plastics, and yeast protein for feeds, derived from a raw material that doesn't need to be harvested seasonally, can be stored without warehouses or elevators, and can be transported without pipelines, tankers, or crates.

## TO SAVE BUILDING MATERIAL

To relieve the shortage of lumber and of structural, plate, and sheet steel, WPB is urging the Army, Navy, and other claimant agencies—and building contractors generally—to use other materials which may be available locally.

WPB's Project Division considers reinforced concrete a good choice for much current construction, provided either metal or used lumber is utilized for forms. These are available for rental in most big cities, according to the Project Division.

Use of more reinforcing bars and less cement than has been wartime practice is recommended by the Steel Division. The supply of bars is reported to be sufficient to meet all requirements. Stockpiles are increasing because such bars can be fashioned from rerolled rail steel or other discarded steel which cannot be used in manufacture of many essential steel products.



his bucker inside the plane (left) by interphones equipped with throat "mikes." Otherwise they'd have to shout or tap. Interphones, consisting of a small battery box, headphones, and microphones, are made by Electronic Specialty Co., Los Angeles.





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A financing program can help make your post-war selling plans successful. Whether your product is suitable for installment selling, or ordinarily sold on open account, our experts will be glad to assist you in working out a plan to suit your needs.

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WHEN that fighting American boards a transport for overseas duty, seven and a half tons of equipment are loaded on with him.

Not just *any* equipment, but articles and supplies to feed him, clothe him, help him fight, and keep him well in the particular part of the world he's headed for.

Every plant producing for war contributes something—in one way or another—to that seven and a half tons of equipment.

C.I.T. Financing Service has aided thousands of these plants, through financing, to keep up and expand their production schedules. In some cases, working funds were needed for raw materials, in others, for equipment or labor. Our service is designed to be flexible, geared to the exact requirements of each manufacturer. It is made available with a maximum of economy and a minimum of red tape.

Such emergency service is no new departure for us. For 35 years, we have been providing working capital for American business. Our financing in the five years before Pearl Harbor totaled more than five and one-half billion dollars.

The vast resources of this organization are at your service today.

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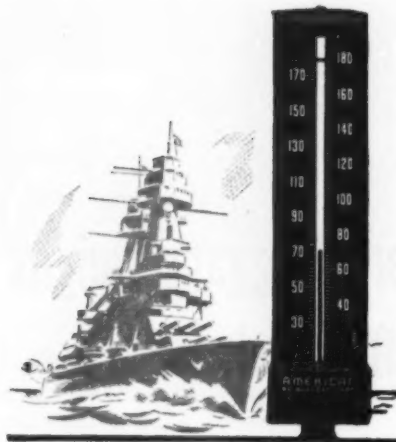
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**E**VEN on a battleship of 20,000 tons or more, the weight of the hundreds of thermometers is a factor that naval architects and shipbuilders consider.

Every pound saved in equipment means another pound of food, fuel or ammunition. As the new American thermometers weigh much less than others, an appreciable amount is added to the carrying capacity.

The fusion-welded cases are exceptionally strong and exclude dust, dampness and oil. The finish is corrosion-resistant which defies the action of salt-laden air.

American thermometers are wide-angled, covered with glareless glass and constructed so that the red-reading mercury is a broad stripe—all for quick, easy reading.

Needless to say they have the enduring accuracy that has made American thermometers the first choice for a great many years.

*American Glass, Dial and Recording thermometers are stocked and sold by leading Distributors everywhere. Write to them or to us for full information.*



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## Oil Wells Blasted

Horizontal drilling method undergoes its first big tryout in Pennsylvania as six-ton charge wrests petroleum from sand.

A 12,000-lb. shot of explosives fired 429 ft. underground produced only a muffled blast above ground, but it may have touched off reverberations which will be reflected in efforts to tap Pennsylvania's rich crude oil reserves.

• **Large Initial Flow**—Thanksgiving Day climaxed 16 months of work by Leo T. Ranney to help solve the problem of waning oil production. Several days after the debris was cleared away following the six-ton supercharge, the two horizontal wells (BW—Oct. 30 '43, p. 60) that

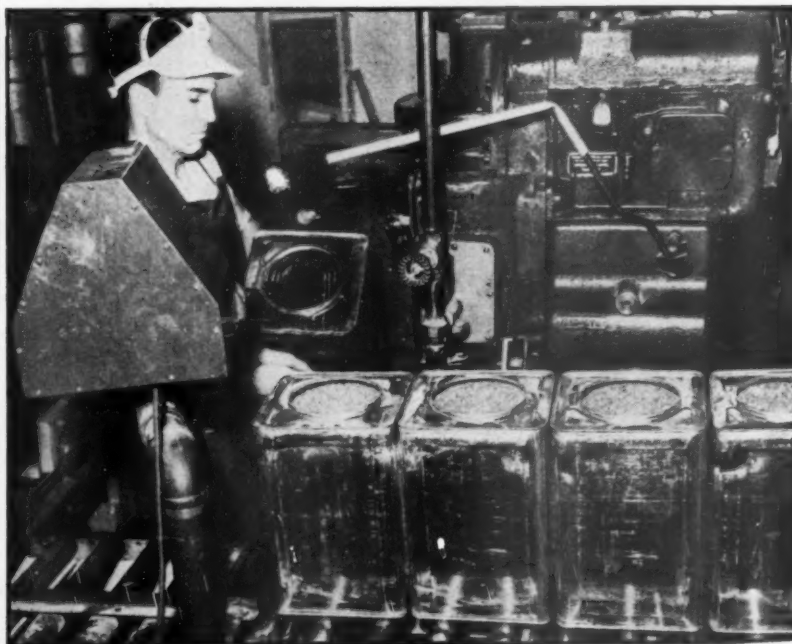
have been completed at Two Mile Run, near Franklin, Pa., were producing 33 bbl. of crude daily, but oil experts anticipate that the flow may eventually taper to 20 bbl. daily.

This is in contrast to the one-fourth to one-tenth barrel produced daily in the Pennsylvania region by the conventional vertical wells, which, when sunk to the strata of oil sands, expose only about 20 ft. of the pay dirt. Pleased with the results of his first major effort to drill horizontal wells, Ranney predicted his method heralds a new era of secondary oil recovery and will produce more oil from fields now abandoned than was obtained originally.

• **Method of Drilling**—His system is to sink a vertical shaft to the oil sands and then drill, spokewise from an underground work chamber, a series of lateral wells that permeate the substrata oil sands. A heavy charge of explosives shat-

## MASS DEHYDRATOR

Carrots—350 tons of them—daily pass through the Spiegl Food Co.'s dehydrating plant at Salinas, Calif. Claimed by its owners to be the largest plant of its kind in the world, the highly mechanized factory boasts a wide revolving circular conveyor system, 360 feet in circumference, (right) on which the vegetables pass under the knives of 165 trimmers. The product is then sent to one of 24 drying tunnels, from which it goes to the cannery. Automatic machines pack the five-gallon cans and seal them under carbon dioxide pressure (below)—all in less than 15 seconds.



## DIAL LONG DISTANCE

If experiments now under way in Culver City, Calif., by the Southern California Telephone Co. work out, telephone subscribers in the Los Angeles suburbs (and, later, in other metropolitan areas) will be able to dial their own toll calls without help from an operator.

The company plans to offer the service officially in the Los Angeles area about the middle of January.

Key to the development is a device which prints a ticket in the telephone office showing the subscriber's number, the number of the phone he calls, the length of his call, and the date on which the call is made.

ters the sands to start the flow of oil, through gravity, to tanks under the work chamber.

Special machinery, much of it designed by Ranney, drills the horizontal wells two at a time on opposite sides of the underground room, and the first two completed, each extending 2,350 ft. into the oil sands, are estimated to be equivalent to 200 vertical shafts. Ranney contemplates 24 horizontal wells in his project, tapping 60,000 linear feet of producing sand.

• **Gelatin and TNT**—The longest shot of explosives ever to be touched off in an oil well—one about 3,800 ft. in length—blew in the two horizontal wells. Charges of 80% high velocity gelatin with a quarter inch line of TNT filled the wells to within 400 ft. of the working chamber.

In addition to routine safety measures, 600 lb. of dry ice crushed in the working chamber helped to speed the transition to carbon dioxide and prevent fire. The gelatin was placed in aluminum shells eight feet in length.

• **Proved in Ohio**—A score of years ago, Ranney conceived the idea of drilling horizontal wells as a more effective method of obtaining crude oil than the customary vertical shafts which, it is estimated, will recover only 8% of Pennsylvania's 6,000,000,000 bbl. of oil reserves. Application of his process on a modest scale in southeastern Ohio three years ago more than paid for itself.

## NEW MEXICO HAS HELIUM

The Bureau of Mines in Washington recently announced the discovery of major helium deposits in western New Mexico. These deposits in the Shiprock region of the Navajo reservation were reported to be larger than those which have been worked for some years in the Amarillo area of western Texas.

Work on the helium wells and proc-

# What can go by AIR EXPRESS?



*Practically anything! Huge pieces of machinery weighing many tons, for instance, can be shipped by AIR EXPRESS, when dis-assembled and packed in smaller units.*

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## AIR EXPRESS RATES REDUCED

As a result of the great volume of Air Express traffic created by wartime demands and the increased efficiency developed to satisfy these demands ... Air Express rates within the United States have been substantially reduced, in some instances as much as 12½%, depending on the weight of the shipment and the distance it moves. Consequently, shippers nationwide are now saving an average of 10½% on air cargo costs.

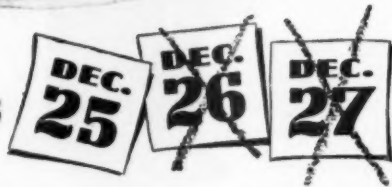
**ASK** for our new 1943-44 CALENDAR-BLOTTER. Write Dept. PR-13, Railway Express Agency, 230 Park Avenue, New York 17, N. Y.



Phone RAILWAY EXPRESS AGENCY, AIR EXPRESS DIVISION  
Representing the AIRLINES of the United States



## Christmas



*Only one day can be Christmas . . . December twenty-fifth. All later entries don't count. The least gift that arrives by the twenty-fifth is gilded by the Christmas spirit, means more . . . The gifts that straggle in days afterward are merely merchandise with good intentions!*

This is one of the worst years in history for the postal service. The wartime load is extra heavy. Thousands of skilled workers are gone in the armed forces, can't be replaced. There just aren't enough trains, trucks, tires, gasoline, substitute workers—and time—for the U. S. Post Office to do its Santa Claus job as usual this year . . . To give your gifts all the glamor that only Christmas gives, buy and mail them early this season—and avoid the crowds, the long waits in line. And wrap your parcels so they can travel in one piece. Print, or at least write legibly, and make sure the addresses are correct. Help your postoffice help you—and make Christmas merrier for everybody!



**PITNEY-BOWES POSTAGE METER CO.**  
1465 PACIFIC STREET, STAMFORD, CONN.



*Originators of Metered Mail . . . largest manufacturer of Postage Meters in the world . . . Now devoted exclusively to war production.*



essing plant has been a common topic in Gallup, N. M., for some months. Test wells have shown a high content of helium at high pressure.

Details of the operation have not been released, due to wartime restrictions, but the Continental Oil Co. and Standard Oil of Indiana have been major operators in northwestern New Mexico for some years. However, under the leasing act of Feb. 25, 1920, the United States reserves the helium rights to all New Mexico public lands.

Helium, a nonflammable gas, is used in lighter-than-air craft, as well as in the practice of medicine. Although previously Texas was the principal source, much of the wartime supply has come from southern Kansas.

## PRIZES FOR PLANS

Rules covering an almost unprecedented "postwar planning competition" are being circulated among employees by the Lincoln Electric Co., Cleveland.

Purpose is to "gather all of the ideas of each employee to assist management in planning for the future." Incentives are cash prizes—a \$500 first, a \$300 second, a \$100 third—to be awarded next August.

Since Lincoln does not intend to have the contest interfere with its regular suggestion system, the same idea may be submitted through both avenues, but "only by the original suggester."



## TONS OF TONGS

Dwarfing a workman and a smaller edition of itself between its claws, a pair of ingot tongs gets final inspection before shipment to a steel mill. There they'll haul hot ingots via overhead crane. Built by Pittsburgh's Heppenstall Co., they weigh more than six tons and have 80-ton capacity. The small ones can handle 1,600 lb.



We're in the Army and the Navy, Mr. Jones!



**M**ONTHS ago the armed services asked Corning to develop a glass out of which messware could be made on a fast production basis. Naturally the product had to be tough and strong because the average K. P. or galley detail isn't noted for gentleness in dishwashing.

The result surprised everybody—even Corning. The dishes are smooth and nice looking. And surprisingly tough. In laboratory strength tests, for example, they are dropped 5 to 7 feet to prove their toughness.

Right now, Corning and the rest of the American glass industry is engaged in showing Hitler what free enterprise can do.

Glass is one of any country's most essential war needs. And in this country there has been no bottleneck in its production. For example in the rapidly expanding chemical field (synthetic rubber, aviation gasoline, explosives) no time has been sacrificed due to lack of essential laboratory glassware. Corning has supplied it promptly.

Again, for bomb sights and intricate fire control apparatus, Corning has developed ways to mass produce optical glass. And planes and tanks and ships are fitted with Corning glass radio insulators.

Perhaps the intelligent application of glass can improve your product,



speed production, or save vital metals. We're "in the service" today, but if it will help end the war sooner, we might be able to show you some short cuts. Corning Glass Works, Corning, New York.

**CORNING**  
—means—  
**Research in Glass**

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**50**  
**New U.S. Aircraft**  
**Carriers being equipped**  
**with**

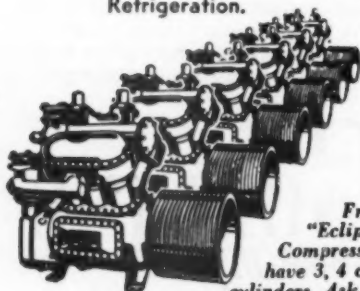


**Refrigeration**

They're being turned out fast (as many as 4 a month) at the Kaiser Shipyard in Vancouver, Wash. A number are already in service. This fleet of 50 ships, each bristling with surprises, will make things sizzle for the Japs.

Each carrier is being equipped with two Frick marine-type compressors, which provide refrigeration for making ice and for cooling four rooms, holding meats, fruits, vegetables, and dairy products.

Thus the U. S. Navy increases by half a hundred more the hundreds of fighting ships already using Frick Refrigeration.



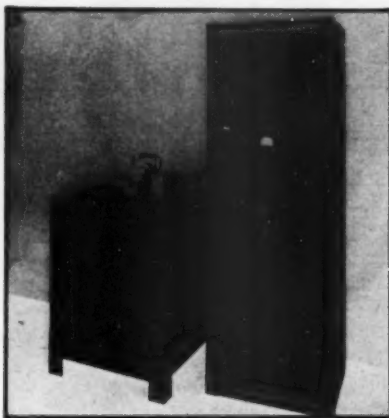
Frick  
 "Eclipse"  
 Compressors  
 have 3, 4 or 6  
 cylinders. Ask for  
 Bulletin 100.



## NEW PRODUCTS

### Electrodynascope

The "piezo effect," or ability of a quartz crystal to produce an electric current proportional in strength to the force of any pressure placed upon it, underlies the Electrodynascope, a new



type of high-speed, high-precision balancing machine developed by the Gyro-Balance Corp., Greenwich, Conn., which will be manufactured and marketed by the Sonntag Scientific Corp., Greenwich, Conn.

Stripped of all the technicalities possible, the machine has a platform (left) equipped with bearing supports and mounted on quartz crystals. When a gyro rotor or other mechanical part is revolved in the bearings at high speed, any unbalance tends to wobble the platform somewhat, put pressure on the crystals, and produce piezo-electric potentials which are magnified by electronic amplifiers. Such amplified currents are made immediately visible on the screen of a cathode ray oscillograph where the degree and the location of unbalance are indicated quickly by the height and position of the sine wave pattern produced. Standard models of the machine will be available for rotor weights up to 75 lb., and speeds up to 12,000 r.p.m.

### Blind-Rivet Driver

"Four blind rivets a minute in aircraft production" is the speed claimed for the pneumatically operated Thor "Riv-Driver," the new blind-rivet setter just demonstrated on the West Coast by the Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago 7. It weighs only 4½ lb., looks very much like a small pneumatic riveter with pistol grip and trigger control, but there the resemblance stops for it is a rotating device, not a hammer.

You insert a B. F. Goodrich "Rivnut" into a prepared blind hole and in-

sert the business end of the driver into the Rivnut's head. When you flip the trigger, four successive operations take place automatically and more quickly than they can be described: (1) A threaded mandrel is run in; (2) an automatic backup pull on the mandrel upsets the Rivnut and clinches it; (3) the mandrel is run out; (4) the whole tool stops in a neutral position and an in-built "OK light" flashes that the job is done. The threads in the rivet are left unharmed for the subsequent insertion of plug screws where indicated.

### Versatile Turntable

First job of the new K-M Brake Turntable, product of the Kelley-Mennes Mfg. Co., 1283 N. Main St., Rockford, Ill., is in the assembly and repair of typewriters. It revolves easily to any desired position and is held there immovably by the flip of a large brake lever. Since the swiveling mechanism is composed of a cast iron top and bottom with ground surfaces, it is said to be steady in any position.

The device comes normally with a 14x14x1-in. square platform, but can be



furnished with larger or smaller platforms, circular or rectangular, or without platform. It can also be had with a slanting easel top to hold large reference books for use by two or more persons working at a desk or table. Other indicated uses include the supporting of visible record cabinets, the mounting of autographic registers which must be turned around for a customer's signature, the supporting of bench plates in machine shops, the display of various kinds of merchandise.

### Heat-Sealing Foil

Hermetic sealing of military packages is being expedited through the use of new Self-Sealing Lead Foil and Lead Sheet developed and patented by Rey-

olds Metals Co., Foil Division, Richmond 19, Va. You fold the material into place and run an iron heated to 1000F down the seams, that's all. In a



packaging machine, the hand iron is replaced by an electrically heated roller.

Explanation of the comparatively low-temperature sealing of a metal that does not normally melt below 621F lies in a "low melting-point solder casing" covering both sides of the foil or sheet. It melts "without affecting its lead core, the heat seal flowing two surfaces permanently into a solid piece of metal."

### Specialized Stepladder

Maintenance of fluorescent lights in overhead fixtures promises to be simplified and speeded through the use of the Ultramar Fluore-Lamp Carrier, new product of the Ultramar Mfg. Co., 303 W. Monroe St., Chicago 6. It is a folding ladder with handy compartments for new and burned-out tubes, tools, cleaning materials, and replacement parts, attached to the rear legs.

### New Products Briefs

Also reported this week, not only for their interest to certain designated business fields, but also for their possible import in the postwar planning of more or less allied fields and business in general, are the following:

► **Photography**—"Texaco TG-223," a new ultra-low-temperature grease developed by the Texas Co., 155 E. 42nd St., New York City, permits aerial camera mechanisms to operate in temperatures down to -100F, lower than any yet experienced at high altitudes.

► **Shipbuilding**—The cranes that lift heavy subassemblies into place in modern shipbuilding are large, some of them having cabs 60 ft. above ground and booms extending 100 ft. or more into space. Big as they are, they can be overhauled and overturned. To forestall such eventualities, General Electric Co., Schenectady, N. Y., offers a new Crane Stability Gage, a compact boxlike instrument with a dial which promises to give a crane operator a "continuous picture of his margin of safety, and automatically stops the crane if it takes on too heavy a load or if the boom moves too far out."



One way you can help cure the wire wheel shortage

*Turn every wire wheel Every Day!*

**Increase brushing tool life up to 200%, increase production, improve work, help operators.**

**T**HIS is what happens when a wire wheel is run in the same direction constantly. The individual wire ends become dull, reducing the cutting action of the brush. The operator in seeking to maintain the cutting action applies the work to the brush with greater force. This starts the wire bending. The operator pushes harder—the wires heat, fatigue (crystallize) and begin to break off.

*But if you turn every wire wheel every day, the end of the wire will wear evenly—each wire always has a straight edge with full cutting value constantly maintained. That means you get out more and better work, and far more pieces per brush. And since the operator doesn't have to increase his push, the work is easier on him and he does a better job.*

Brushing wheels are like any other tool—there is a right and wrong way to use them on each job. The Osborn Brushing Specialist can work with you to make sure the right way in your plant gives you longer brush life and better work. This service is free, regardless of the make of brushing tools you use. It has doubled brush life in many plants. Write *The Osborn Manufacturing Company, 5401 Hamilton Avenue, Cleveland, Ohio.*





# WAR BUSINESS CHECKLIST

A digest of new federal rules and regulations affecting priorities and allocations, price control, and transportation.

## Critical Materials

Purchase orders for a list of specified products—either critical materials or materials needed in more than one important war program—must be placed before Jan. 1, 1944, for delivery during the first six months of 1944, the War Production Board has announced. Orders to be delivered in the third and fourth quarters of the year must be placed before Mar. 1, 1944. (Direction 2, Priorities Regulation 18.)

## Production, Processing Machines

Regional offices of the War Production Board may now approve or deny construction projects involving production machinery and processing equipment when dollar value involved is less than \$10,000. Formerly, field offices were not allowed to authorize such projects. (Field Administrative Order 708-20, as amended.)

## Controlled Materials

In a new Controlled Materials Regulation, 9A, procedures have been established whereby repairmen may obtain materials and parts, provided such material is used only for repairs. Persons operating farm machinery repair shops, blacksmiths, radio repairmen, upholstery repairmen, electricians, plumbers, and others are affected by the order, which permits them to buy up to 20 tons of carbon and alloy steel, a total of 500 lb. of copper and copper base alloy brass mill and foundry products, and 200 lb. of aluminum in specified forms and shapes, in a calendar quarter. A repairman may buy as much other material and as many repair parts as he needs for his maintenance and repair work.

Amendment to CMP Regulation 9 reduces the amount of copper wire available to retailers to \$50 worth per quarter, or to 1/8 of the amount sold in 1941; allows retailers to fill farmers' orders for copper wire on receipt of an allotment certificate; and eliminates provisions permitting repairmen to obtain this wire, since these provisions are now covered by CMP Regulation 9A.

## Lead Wire

Restrictions on chromium and nickel used in extension lead wire for instrument ends have been modified. Hereafter, the size of wire will be limited to #14 B and S gage or smaller, except when the wire is used on aircraft, or for superheater pyrometers on locomotives. This action will make available some 25 tons of alloy material annually. (Order L-134, as amended.)

## Saw Blades

A standardization program for power-driven, wood-cutting saw blades reduces the varieties of solid tooth circular saws, and wide and narrow handsaws from approximately 5,400 to 1,404. Three schedules are set up, one for each of the types named, with

specifications as to kinds, diameters, gages, number and type of teeth, and tolerance of gages, under each schedule. Metal-cutting saw blades are not included. Saws that do not conform to the schedules may be manufactured if orders were received before Nov. 23 but may not be shipped or delivered after May 23, 1944. (Order L-326, including Schedules I-III.)

## Platinum

Processors of platinum may not hold platinum scrap in excess of the amount accumulated in 30 days (exclusive of sweepings). No processor or consumer may have an inventory of platinum, in all forms, amounting to more than enough to meet delivery demands for 60 days. (Order M-162, as amended.)

## Construction Equipment

Under a new pricing arrangement for leasing construction and road maintenance equipment to contractors by the War and Navy departments, the lessees are required to make repairs and replacements at their own expense and are consequently charged a lower rental. Maximum rates to the lessee may not exceed 85% of the maximum rates in Regulation 134. This 15% cut is to reimburse lessees for repair charges formerly paid by the lessors. The amendment does not apply to repairs of hidden defects existing before the equipment was rented. (Amendment 13, Regulation 134.)

## Services

To maintain a supply of low-priced services, restrictions have been placed on conditions under which suppliers may drop such services and substitute higher-priced ones. These restrictions apply to laundering, dry cleaning, servicing of automobiles, shoe re-

pairing, and others specified. Low-priced work may be dropped (1) if specialized equipment needed is not available; (2) if government regulations forbid it or render it impracticable; (3) if discontinuance of the service would allow the seller to maintain a more essential service; (4) if other suppliers in the community can perform the service at the ceiling prices. (Revised Supplementary Service Regulation 18, under Regulation 165.)

## Processed Foods

Wholesalers' maximum allowable inventories of rationed processed food have been reduced approximately 10% by OPA for the period Jan. 1 through Jan. 29, 1944. (Amendment 30, Revised Supplement 1, Ration Order 13.)

## Canned Citrus Products

Canners of citrus products are required to set aside the following percentages from their 1943-44 pack to meet government war needs: grapefruit juice, 32% of 1942-43 pack; grapefruit segments, 55% of 1941-42 pack; orange juice, 42% of 1941-42 pack; blended citrus juice, 60% of 1941-42 pack. (Food Distribution Order 22.5.)

## Slaughter Quotas

To meet the need for more food, the War Food Administration has suspended quota limitations on the slaughter of livestock until further notice. Thus a packer or a butcher holding a government slaughter license may kill livestock for civilian use without restriction.

## Imported Fats and Oils

Several fats and oils and oil-bearing materials produced in other countries may be purchased by private industry instead of by a government procurement agency, though the use of these oils will still be controlled by the Food Distribution Administration. Affected by this order are castor and oiticica oils; cashew shell liquid from Brazil; sesame seed, tucum and muru muru cornels and oils; glycerin from Argentina and Canada; oleic acid, stearic acid, and corn oil. Im-



American Bantam Car Co.  
Butler, Pa.  
Atlas Powder Co.  
Paducah, Ky.  
Diamond Wire & Cable Co.  
Chicago Heights, Ill.  
Electronic Enterprises, Inc.  
Newark, N. J.  
George K. Garrett Co., Inc.  
Philadelphia, Pa.

The Four Wheel Drive Auto  
Co.  
Clintonville, Wis.  
B. F. Goodrich Co., American  
Anode, Inc.  
Akron, Ohio  
Gray Stamping & Mfg. Co.  
Plano, Ill.  
Hart-Carter Co.  
Peoria, Ill.

Hayward-Schuster Woolen  
Mills, Inc.  
East Douglas, Mass.  
Holtzer-Cabot Electric Co.  
Boston, Mass.  
The Frank G. Hough Co.  
Libertyville, Ill.  
Koehring Co.  
Milwaukee, Wis.  
Nubian Paint & Varnish Co.  
Chicago, Ill.  
J. R. Simplot Dehydrating  
Co.  
Caldwell, Idaho  
Southern Alkali Corp.  
Corpus Christi, Tex.  
Tennessee Eastman Corp.  
Kingsport, Tenn.  
Western-Newell Mfg. Co.  
Freeport, Ill.  
Wilson Athletic Goods  
Mfg. Co., Inc.  
Chicago, Ill.

(Names of winners of the Army-Navy and Maritime Commission awards for excellence in production announced prior to this new list will be found in previous issues of Business Week.)



Fresh food on the high seas during long, heavy-action periods away from port is the result of compact, efficient refrigeration.



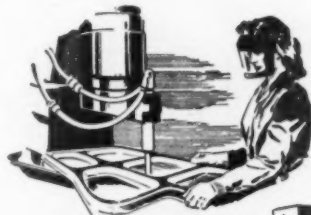
Self-Contained  
1 1/2 h.p. Refrigerating Unit



Cool, clean air protects the life of the wounded in Army hospitals. Special aircraft refrigerators safeguard serums and plasma.



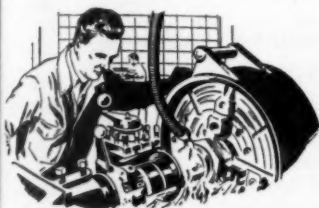
Aluminum  
Aircraft Refrigerator



Peak welding efficiency is made possible by cooling of welding tips with water or brine held at the right temperature.



Spot Welder  
Tip Cooling Unit



Tool life is increased and rejections are fewer when cutting oils used in high-speed machining are properly cooled.



Refrigerating Unit



The health of our armed forces is protected by dependable refrigeration in cantonments, huts, barracks, and on ships.



14 Cylinder  
Refrigerating Compressor



Super accuracy in gauge rooms is possible when the air is clean, dehumidified, and maintained at a constant temperature.



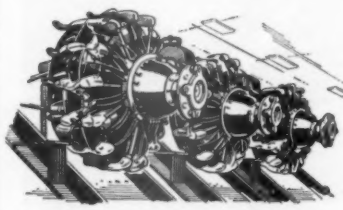
3 h.p. "Packaged"  
Air Conditioner



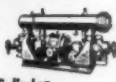
Protection in the tropics against the ravages of humid atmosphere and vermin is necessary to preserve food and equipment.



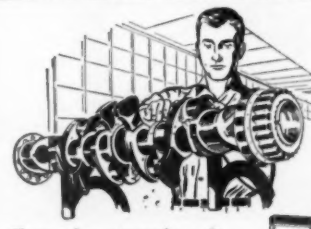
Portable Panel  
Refrigeration Unit



Identical performance of aircraft engines is assured by operation tests with carburetor air kept at the same temperature.



14 Cylinder  
Air Conditioning Compressor



Clean, dry atmosphere is vital for machining sensitive metal surfaces where a spot of rust would ruin high-precision products.



5 h.p. "Packaged"  
Air Conditioner

# ★ CHRYSLER AIRTEMP AT WAR ★



From tiny, fractional horsepower to big 75 horsepower units, Chrysler Airtemp Radial Compressors are performing a major war job on both the production and battle fronts.

The science of air control is built into the compressor. Chrysler Airtemp's exclusive Variable Capacity Radial Compressor provides a new efficiency and accuracy in indoor climate regulation. The radial cylinders cut in or out automatically, one at a time, to meet varying requirements. This flexibility eliminates the peaks and valleys resulting from abrupt starting and stopping of ordinary compressors... holds temperature and humidity at a constant level.

Years spent in building delicate mechanisms, have developed high-precision, versatile skills at Airtemp, now devoted to war production. Backed by Chrysler Corporation research and engineering, when peace comes, these skills will again create heating, cooling and refrigeration units for homes and commercial use that will set new, high standards of efficiency and performance.

The lessons learned during peace in free competitive enterprise—freedom of the individual to produce and compete—today bring strength to a nation at war.

## War Products of Chrysler Corporation

Tanks • Tank Engines • Navy Anti-Aircraft Guns • Army Anti-Aircraft Guns • Bomber Fuselage Sections • Bomber Wings • Bomb Racks • Bomb Shackles • Fighter Landing Gears • Aluminum Alloy Forgings • Aluminum Alloy Castings • High-Powered Aircraft Engines • Cyclooid Cement • Wide Variety of Ammunition • Anti-Tank Vehicles • Command Reconnaissance Cars • Troop and Cargo Motor Transports • Ambulances • Weapons Carriers • Gyro-Compasses • Navy Pontons • Marine Tractors • Harbor Tugs • Marine and Industrial Engines • Smoke Screen Generators • Air Raid Sirens and Fire Fighting Equipment • Powdered Metal Parts • Cantonment Furnaces • Tent Heaters • Refrigeration Compressors • Field Kitchens • and Other Important War Equipment

Tune in Major Bowes every Thursday, CBS, 9 P. M., E. W. T.

## Chrysler Corporation

PLYMOUTH • DODGE • DE SOTO • CHRYSLER • AIRTEMP • AMPLEX  
BACK THE ATTACK—BUY WAR BONDS



Enlarged reproduction free on request.

## Wissco Wire-Warrior

**Wissco wire** is ordinarily peaceful. Formed into springs, wire cloth, fence, rope and other products it helps make life easier and better. But get it mad, and it becomes a weapon for war.

On the battlefronts today, Wissco-quality wire and wire products are adding to the fighting efficiency of planes, tanks, warships and guns. On the home front Wickwire fence is protecting war plants. Woven into flexible metal conveyor belts this tough wire is speeding factory

output, cutting production costs. Shaped into its various forms, Wissco wire is serving in practically every industry.

The Wickwire Spencer blast furnaces, open hearths and five great plants are working day and night, producing vast quantities of tough steel wire and wire products for military needs. Let Wickwire Spencer's 122 years of accumulated skill in wire production help meet *your* needs. Put your wire problems up to experts.

## WICKWIRE SPENCER STEEL COMPANY

500 FIFTH AVE., NEW YORK (18), N. Y. ... AND KEY CITIES

FAMOUS FOR QUALITY IN WIRE, WIRE ROPE, SPRINGS, METAL CONVEYOR BELTS, INDUSTRIAL WIRE CLOTH, POULTRY NETTING, HARDWARE CLOTH, INSECT SCREEN CLOTH, ELECTRICALLY WELDED FABRIC FOR CONCRETE



porters must obtain exemption under War Production Board's General Import Order M-63 by application on WPB Form 1041.

### Rubber Garments

Prices for garments (such as corsets, girdles, and garters) that in March 1942, were made with natural rubber and that are now made with synthetic rubber established under the second pricing method of MPR 220. This means that the manufacturer may raise his ceiling for the article by the exact amount of the increase in direct cost caused by the change from natural to synthetic rubber. This Office Price Administration announcement has been made in answer to questions from manufacturers.

### Christmas Packages

Rules for determining maximum price that retailers and wholesalers may charge for articles specially packed for Christmas have been announced. Rules are effective between Dec. 1, 1943, and Jan. 15, 1944, and apply only to articles packaged by the manufacturer or producer. For articles packed primarily in paper or ordinary cardboard, that are regularly sold at other seasons of the year, the maximum price for contents and packaging is the normal ceiling of the contents without special wrapping. In the case of articles packaged in other materials than paper or ordinary cardboard and which are not ordinarily sold by the vendor in other seasons, the package may be treated as a single commodity and priced



### WEB BELT SPLICER

At Pittsburgh, Westinghouse recently opened a training school to pass along to other companies its wrinkle for repairing cotton web belts. Developed by a veteran employee, Max Kholos (left), the method permits splicing of broken belts without stitching. He tapers both ends, cuts back each ply step-fashion, then cements with waterproof glue—making the belts serviceable in about 30 minutes. Kholos received patent rights and a \$1,200 award for his wrinkle.



the formula in section 3 (a) of GMPR. These items wrapped for holiday sales do not under this regulation, since they have been covered by the ruling for packaged cosmetics. (Amendment 1, Supplementary Order 24.)

stockpiles of wool, together with the decline in military requirements (BW-20/43,p52), are sufficient to enable the War Production Administration to lift all restrictions on the use of wool in the manufacture of clothing, drapery and upholstery fabrics, and to leave two restrictions on the use of raw wool. The finer grades of alpaca are reserved for military purposes, and only caracul and mohair are permitted in the production of floor coverings. (Order M-73, as amended.)

Order M-176 (Rayon Staple Fiber), designed to help wool producers get rayon fiber to blend with wool, has been issued.

### Insulation

The indemnity payment program to promote the manufacture and sale of cotton insulation, in effect for the year 1942-1943, was continued to June 30, 1944, the War Production Administration has announced. This program, which provides for the manufacture, sale, and delivery of up to 60,000,000 pounds of finished cotton insulation, will help set up a commercial market for the grade cotton that is ordinarily hard to sell. An allowance of 9¢ per lb. will be paid for insulation cotton produced under the program.

### Quotas

Book publishers who have not used all their bona fide 1943 print paper quotas may carry over these unused portions into 1944 if they notify the War Production Administration's Printing & Publishing Division by June 31. This action has been taken to help publishers whose printers cannot fill orders before the end of the year because of production delays. (Order L-245, including Interpretation 1, as amended.) Newspaper publishers may also carry over into the first quarter of 1944 any portion of their print paper quota for the second quarter of 1943 which they did not use. Carryover may be added to their consumption quotas but not to their inventories. (Order L-240, including Interpretation 1-3, as amended.)

### Increased Civilian Goods

The minimum amount of cork to be obtained in the government's war stockpile has been considerably reduced by a WPB directive, which cuts the pile to less than half the amount at which it was in 1941 and thus releases additional cork for civilian use. . . . Restrictions have been removed on the transfer of gramophone records and cutting styli, used in connection with radio broadcasting and sound recording, by WPB's Order L-265, as amended. . . . As a result of Amendment 7, Ration Order 4A, all stocks of used typewriters may be rented to people desiring them, though priority still be given to those holding rental



## Atlas 7-INCH SHAPER

### CONDENSED SPECIFICATIONS

Ram Stroke  $\frac{1}{2}$  to 7"  
Strokes per minute 45, 78,  
122, 200  
Cutting Speeds  $3\frac{1}{2}$  to 116  
feet per minute  
Table Travel, horizontal 91"  
Table Travel, vertical 47"  
Overall Dimensions 36"  
17" x 26" high

### AMONG OUR CUSTOMERS

Addressograph Multigraph Corporation  
Aluminum Company of America  
American Brakeblok Div.  
American Chain & Cable Company  
American Locomotive Co.  
American Safety Razor Corporation  
Bausch and Lomb Optical Company  
Beech Aircraft Company  
Bendix Aviation Corp.  
Bendix Aviation, Ltd.  
Eclipse Machine Div.  
Bendix Products Div.  
Wayne Division  
Zenith Carburetor Div.

We're winning our war on the fighting fronts with new methods and hard-hitting, ultra-modern weapons. And up-to-the-minute machine tools are delivering the same kind of winning punch on the production front, too!

In thousands of plants throughout the country, Atlas Machine Tools are producing more at lower costs. In plant after plant, engineers have learned to match these modern, compact precision tools to the job of small parts production so that capacities of larger machines will not be wasted.

The Atlas Shaper, handling all work within a 7" stroke, is one of the outstanding Atlas performers. It sets up quickly, is easy to operate, has all the precision of larger machines and powerful crank-type ram drive.

"Match the machine to the job" will be as potent in peacetime as it is for war production. Get acquainted with the Atlas tools

now for greater postwar profits. Send for details and name of our nearest distributor.

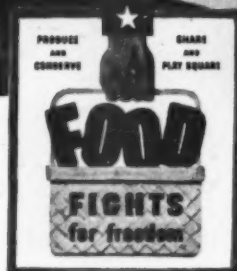
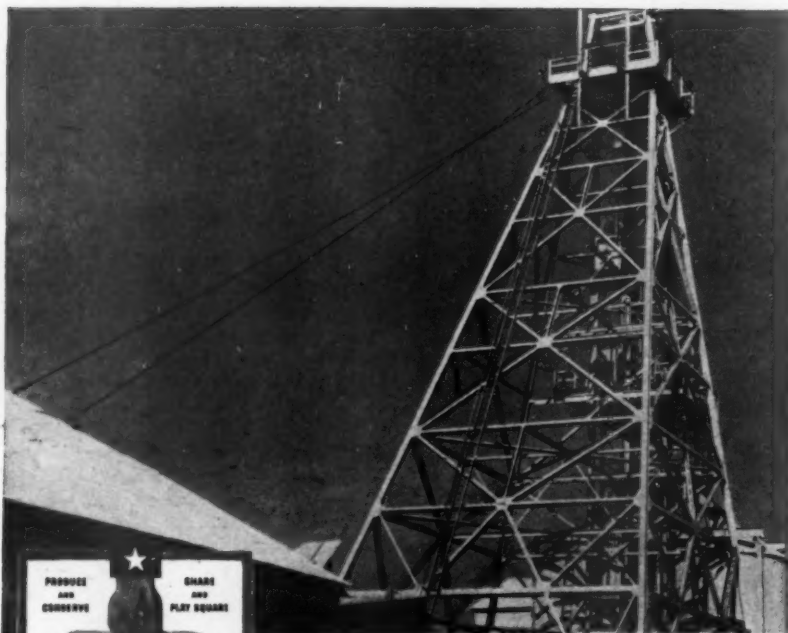


## ATLAS PRESS CO.

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## Atlas 4 TOOL TEAM for Small-Parts Machining





## You have a stake in this food mine

Up this shaft comes potash, from vast ore beds 800 feet below the earth's surface. Itself a plant food, used to enrich the soil, potash is vital to maintaining production of the foods that fight for freedom. Because all of us seek to support that program, we also have a common stake in aiding the food industries to operate efficiently.

One form of Broderick & Bascom's service is providing the Yellow Strand *Preformed Wire Rope* that carries workers down into busy potash mines, then hoists their output with speed and

safety. Other smooth-running, long-lived Yellow Strand ropes are mainstays of food growers, processors and shippers. These are served no less by you every time you conserve your own wire ropes and thus help to make the supply go around.

Like our armed forces, the nation's war production industries show a preference for the flexibility and fatigue resistance of *preformed wire rope*. When you must replace an essential rope, install *Preformed Yellow Strand*. And get the full benefit of its extra wear by giving it good care.

**Broderick & Bascom Rope Co., St. Louis**

Branches: New York, Chicago, Houston, Portland, Seattle. Factories: St. Louis, Seattle, Peoria

**YELLOW  
STRAND**

**PREFORMED WIRE ROPE**



B & B's Army-Navy "E" Flag, Four Times Won, Means that  
WE SERVE THE GOVERNMENT AS WE SERVE INDUSTRY: WITH DETERMINATION  
THAT OUR ENTIRE ENERGIES AND RESOURCES SHALL HELP TO WIN THE WAR

certificates. . . . In addition to the supply of canned grapefruit juice, canned apple, asparagus, and other vegetables recently made available for civilian consumption, 2,600,000 cases of canned string beans and tomatoes are released for civilian use by the Food Distribution Administration. . . . An 8% increase in the number of umbrella frames produced annually (BW-Feb. 13, 1941, p30) and a doubling of production of pair parts for umbrellas are effected through WPB Order L-36, as amended, with effect through OPA Amendment 52, Revised Supplementary Regulation 14. . . . Umbrella prices on frames for women's umbrellas increased about 90¢ per doz. on sales to umbrella producers.

### Other Price Actions

Manufacturers of all types of lead storage batteries may add to their October 1941, prices per lb. of lead in the battery under Amendment 106, Regulation 1. . . . Markups of 15% are allowed to wholesalers of gelatin over maximum prices for processors on sales of 25-lb. containers of manufacturers of food products and pharmaceutical products in which gelatin is used (Amendment 1, Regulation 362). . . . Wholesale and retail prices for dry edam beans have been cut as much as 2¢ a lb. as a result of specific markups reducing the spread between country shipper and wholesaler (Second Revised Regulation 270). . . . Thinner gages of Buna-S compounds may be used in the manufacture of waterproof rubber footwear, since indications are that thinner gages do not reduce the serviceability of the product (Amendment 5, Regulation 132). . . . The cost of printing and dyeing government rejects of nylon parachute cloth may be added to the civil ceilings for these rejects, according to Amendment 14, Regulation 127. . . . Regulation 462, controlling prepared food mixes, has been amended to make it clear that the most closely comparable commodity used in determining markup must not exceed in price 165% of the direct cost of the product priced under the formula (Amendment 1). . . . Specific cents-per-lb. ceilings have been set for two types of hard candy usually made for holiday sale (Amendment 59, Revised Supplementary Regulation 1).

### Other Priority Actions

To increase supplies of insecticides, the War Food Administration has reserved certain low grades of the 1943 crop of specific types of dark tobacco for use in making nicotine sulphate and nicotine alkaloids (Food Distribution Order 4.4). . . . In view of the available two-year supply of Indian kyanite, used in the manufacture of high-temperature refractories and critical war products by the glass and metallurgical industries, Conservation Order M-143, controlling that material, has been revoked. . . . Suppliers (chiefly photographic supply houses) may sell in any calendar month up to 54 gal. of acetic acid, acetic anhydride and acetaldehyde without authorization from WPB (Order M-243, as amended). . . . WPB's Order L-241, as amended, authorizes manufacture of specified weights of paper for art reproductions (without advertising), corporate securities, checks, domestic and foreign currency, and telephone directory covers.

## Nobody knows the troubles we've seen...

*There was the man who wanted to know what he  
wanted to know when he wanted to know it  
... while it was of some use to him.*

*The firm that couldn't afford tomorrow for data  
needed in today's operation.*

*Costs that wouldn't wait without watching, and  
couldn't be watched without waiting.*

*Clocks that wouldn't stand still for statisticians.*

*The executive behind the eight ball, because he  
never could find where the eight ball was  
before he found himself behind it.*

*The comptroller who couldn't cope with controls.*

*Production poorly paced by pedestrian paper work.*

*The business man flying blind, and off the beam.*



**McBEE CASE HISTORY**— Foundry personnel up  
from 900 to 1500 . . . payroll and payroll distribution  
costs handled with the addition of only  
two untrained people . . .



... **THESE** are not solo instances. Thousands of similar case histories are in our files, and under our hats. Your business may be benefited by what we have learned in ours . . . *which is making facts available faster . . .* through simple methods that channel current information easily and quickly, save time and effort, prevent problems. McBEE experience makes methods conform to your business—not vice versa . . . Current clients include Army, Navy, various branches of government, and several thousand commercial companies . . . If you should know more about your business, you should know more about McBEE . . .



### THE McBEE COMPANY

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# LABOR

## Incentive Pay Cut

War Labor Board sanctions reduction in Republic plant at Detroit where piece rates have had long history of trouble.

One reason why a section in the United Automobile Workers (C.I.O.) has enthusiastically favored incentive wages is that members of U.A.W. Local 817 take home some of the fattest pay envelopes in Detroit. Local 817 covers the Republic Aircraft Products Division of Aviation Corp. and is a party to an incentive wage contract which has made the company one of the highest paying war plants in Michigan.

However, a National War Labor Board decision handed down over the week end promises to change that and, consequently, to deflate some of the U.A.W. ardor for incentive pay. All NWLB did was to approve an arbitration award allowing Republic to retime certain piece rates. But the effect of that ruling will be to cut the pay that Republic employees are receiving since most of them work under a piece-rate system.

• **How It Started**—The background of the board's action is a wrangle between the company and the union which began shortly after an incentive wage contract, designed to speed vital defense production, was signed in May, 1941. That contract provided that after a piecework price or rate of production had been in operation 20 days, and no grievance had been filed about it, "the time study of the job in question would be considered fair," and the rate would stay in effect until new factors altered the job or until union and company agreed to change the rate.

In order to get new operations started, it had been necessary to fix temporary or estimated rates on some jobs without a time study. Arguments developed over these jobs. The union maintained that piece prices had become permanent after being in existence for 20 days without a challenge. Republic countered with the statement that the 20-day trial applied only to jobs which had actually been clocked.

• **Charge and Countercharge**—The area of contention soon expanded with the company claiming that the union did not live up to its responsibilities which included agreement to piece-rate reductions when earning cards showed "abnormal wages," and the union claiming the company used minor and insignificant changes in operations methods

and tooling as an excuse for reducing rates.

NWLB found some basis for both the union and the company contentions. In tracing back the cause of the trouble at Republic, the board opined that the parties' inability to administer the 1941 agreement resulted in abnormal variations in earnings—"some clearly too high, others clearly too low"—which had no sensible relation to the skills that are required to do the jobs.

• **New Agreement**—By 1942, both company and union had recognized the obvious defects and dangers to production inherent in such a wage structure, and in February of that year, they wrote a new agreement which called for eliminating "the peaks and valleys of the piecework prices" without materially altering the general average. In order to achieve this objective, the company was to set up a "master book" in which each job or operation would be designated as a time-study rate, an estimated price, or a temporary rate. It was agreed that the company had the right to time study operations and revise piece rates in the event that there was a change in operation.

In reviewing the history of the case, NWLB said that if the February, 1942, agreement had been carried out by both parties in good faith it would have

helped to equalize wages and could have become the basis for stable labor relations.

It was soon apparent, however, that the new contract effected no change in the situation. Again the company charged the union with resisting the right of the company to clock jobs and the union countercharged bad faith in making job changes.

• **Then a Stipulation**—When the contract came up for renewal, the question of setting proper piece rates was one of the issues. The various agreements between the parties were certified as a dispute to NWLB. board representative, assigned to the case, secured a stipulation between the parties in July, 1942, which was signed finally to settle all matters then in dispute including the fevered piecework question.

The stipulation contained ambiguities, however, and it failed to settle much of anything beyond the fact that disagreements over time-study rates were to go to arbitration. But the record does show that, following the execution of the stipulation, production zoomed.

Republic explained the boost in output by claiming that employees had been "holding back on production and metering their jobs. They did not get to the time-study men their best effort and through trickery were withholding production." The company reported that earnings "increased from an average of \$1.60 to \$1.80 an hour, and some employees were making as high as \$2



## LITTLE MANPOWER BOOSTER

Zenith Radio Corp., seeking a new labor supply by offering the hard-of-hearing free use of its new \$40 Radi-omic hearing aid, is practicing what it preaches. Zenith, which obtained priorities for wartime manufacture of the aid on the argument that it will tap new manpower sources, contends that

of an estimated 350,000 Chicagoans with impaired hearing, the same percentage should be employable as compared with any other segment of population. Zenith's offer—ownership of the device after 60 days' employment—has drawn a small, steady stream of applicants for jobs. The company hopes to have 1,000 such workers by the middle of January.

# That *Postwar Vision* may be clearer

**F**LUORESCENT lighting will bring better vision to postwar office and home, just as it does to war plants now.

Under the pressure of war, quality research has been accelerated and extended to every phase of fluorescent lamp manufacture.

For example, it is true that the more immaculate the glass in a fluorescent lamp, the more light you get. Therefore, Sylvania has developed an improved lamp cleaning process.

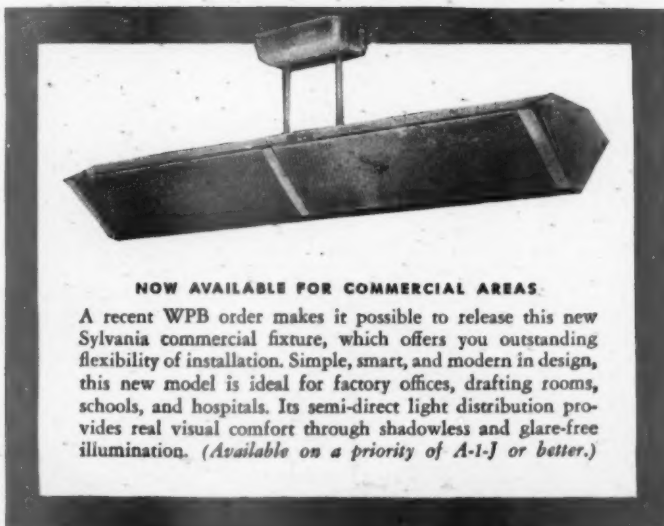
Sylvania lamps now pass through two steaming hot baths of constantly changing water, in chemically treated ceramic vats. Thoroughly washed in the first, they are rinsed in bubbling, aerated water in the second. Any surviving dust is removed with power-driven, non-linting nylon brushes.

This meticulous care produces a superior inner surface for coating that distinguishes Sylvania Fluorescent Lamps.

The result is the best and most economical artificial light known — cool, glare-free fluorescent light.

Specify Sylvania Fluorescent Lamps for replacements and new installations.

★ **SYLVANIA** ★  
**ELECTRIC PRODUCTS INC.**  
500 FIFTH AVENUE NEW YORK 18, N. Y.  
INCANDESCENT LAMPS, FLUORESCENT LAMPS, FIX-  
TURES AND ACCESSORIES, RADIO TUBES, CATHODE  
RAY TUBES, OTHER ELECTRONIC DEVICES



**NOW AVAILABLE FOR COMMERCIAL AREAS**

A recent WPB order makes it possible to release this new Sylvania commercial fixture, which offers you outstanding flexibility of installation. Simple, smart, and modern in design, this new model is ideal for factory offices, drafting rooms, schools, and hospitals. Its semi-direct light distribution provides real visual comfort through shadowless and glare-free illumination. (Available on a priority of A-1-J or better.)



TWO symbols of excellence—each recognized as a mark of achievement in attaining and maintaining highest standards of performance.

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## Do people like you instinctively?

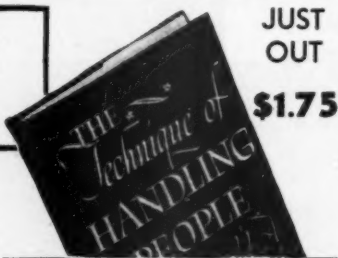
Do you know how easy it is to exercise the qualities that impress people favorably, that lead them instinctively to give that extra ounce of loyalty, cooperation, and effort to your ideas and orders?

To win the rewards that beckon to leadership today, in all walks of life, you *must work with people*—get them to like you—get over your ideas to them—influence their thoughts and actions. And now a plain method of developing this ability—11 simple rules that successful business leaders follow—things that you can start doing today, without study or practice—are given in this new book.

### Read what—

**EUGENE G. GRACE**, who became president of Bethlehem Steel at thirty-seven, says about observation;  
**WALTER A. GIFFORD**, who became president of A. T. & T. at forty, says about listening to opinions;  
**CHARLES E. WILSON**, self-made president of General Electric, says about wanting to get ahead;  
**WALTER D. FULLER**, who advanced from selling copies of the *Saturday Evening Post* to presidency of the Curtis Publishing Co., says about Big Ideas to get ahead;  
**LOUIS RUTHENBURG**, who became president of Servel at forty-six, says about the spirit of work.

The observations of these and many other important men of industry lend concrete evidence to back up the soundness of Dr. Laird's book. The book gives seasoned, practical advice on the technique of handling people and shows in quickly understandable fashion how to use the psychology of leadership.



## THE TECHNIQUE OF HANDLING PEOPLE

By DONALD A. LAIRD  
and ELEANOR C. LAIRD

JUST  
OUT

\$1.75

### How to understand and work with others

This readable, practical manual presents 11 pointers on what to do and say in your everyday contacts with others, in order to win their friendship, good-will, and cooperation. The methods are clearly demonstrated in numerous stories of real people, outstanding leaders, of today, and together form a direct, easy-to-understand, easy-to-use technique for improving your relations with others and especially for securing better results in training, directing, supervising, and other elements of successful leadership.

\*\*\*\* ASK TO SEE IT 10 DAYS ON APPROVAL \*\*\*\*  
McGraw-Hill Book Co., 330 W. 42 St., N.Y.C. 18  
Send me Laird's *The Technique of Handling People* for 10 days' examination on approval. In 10 days I will send \$1.75, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

Name .....

Address .....

City and State .....

Position .....

Company .....

BW-12-4-43

an hour." The union stated flatly that the high earnings were the result of a greater effort expended by employees of much more than average ability and skill.

Looking for a fact, NWLB did find that the high earnings possibilities in Republic attracted some of the most capable workmen in the Detroit area to the plant.

• **Sent to Arbitration**—In December, 1942, the company asked the union to agree to put in effect the findings of its time-study men and thereby reduce certain piece rates. Republic maintained that a review of earning cards, in accordance with procedure established under the contract, showed that certain rates should be reduced.

The union refused to agree, and the controversy went to arbitration. In March of this year, the arbitration award, upholding the company's right to institute piece-rate changes under the terms of the May, 1941, contract, was handed down. U.A.W. immediately protested, characterizing the decision as a "blank check" for the company and challenging its legality under Executive Order 9250 and the Economic Stabilization Act which provide that there can be no "decrease in the wages for any particular work below the highest wages paid therefor between January 1, 1941, and September 15, 1942, unless to correct gross inequities and to aid in the effective prosecution of the war."

• **Regional Board Tries Hand**—The labor dispute which ensued, as the union protested the company's right to put the arbitration award into effect, was certified to NWLB which referred it to the regional board in Detroit. The Detroit board, unable to establish conclusive evidence of how rates would be affected by the arbitrator's award and thus unable to determine whether the award violated the wage stabilization program, directed that joint company-union time studies be undertaken of all rates in dispute. It also declared that any changes in piece rates should not bring them lower than "the average hourly rates for the particular job for the period between September 15, 1942, and December 15, 1942."

• **Board's Decision**—Republic appealed the Detroit decision to NWLB in Washington and a unanimous board decided:

(1) In accordance with the agreement voluntarily entered into by the parties an arbitrator has rendered a final and binding award which does not contravene any provision of the collective bargaining agreement now in effect. This award—the one permitting the company to reduce piece rates—has status and must be effectuated. Any particular wage adjustments which are not proper under the Act of October 2, 1942, and executive orders issued thereunder and which may be made in the course of carrying out the award will not be approvable.

(2) The Regional Board erred in re-



To the Girl he  
left behind him...

These are lonesome, waiting days for you.  
The telephone is strangely silent. No  
door bell rings.

Across a thousand, thousand miles of  
straining heartstrings, his hand rests on  
your shoulder.

"Keep your chin up," he seems to say.  
"I'll be back."

With all your heart, you wish he were back  
—now!

Bringing him back sooner is what we, too,  
are living for and working for. Your man,  
and our men. Back! Safe!

So we're making carbines—powerful, light-  
weight guns—for your man . . . instead of  
shiny, new, smooth-touch typewriters for you.

We know you're glad that's the way it is.

We know you could use a new Underwood.  
It would help you do your work faster,  
easier, better. We'd like you to have it, too  
—if it weren't for him.

Like you, we're mighty proud to be working  
hard to speed the day when he'll come  
back to you!

### Underwood Elliott Fisher Company

One Park Avenue, New York 16, N. Y.

★ We are now in war production on—U. S. Carbines,  
Caliber .30 M-1—Airplane Instruments—Gun Parts—  
Ammunition Components—Fuses—Primers and Mis-  
cellaneous Items.

Enlist Your Dollars . . . Buy War Bonds . . . To Shorten the Duration

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## DOUBLE VISIBILITY

**Speeds Up  
Wartime Records  
and Accuracy**

Only Globe-Wernicke records give you the extra speed and ease of visibility on both sides—without removing cards. Patented Globe-Wernicke, hinged cardholders make these visible records easy to remove and insert—one card at a time or groups of cards. Get all the **FACTS AT A GLANCE** for speedier personnel records, production control, material handling—and a great variety of other records. See your Globe-Wernicke dealer—or get the facts from



quiring (a) joint time studies, and (b) that no rate revisions should reduce the level attained between September 15, 1942, and December 15, 1942. Its action in this respect is rejected.

(3) NWLB upholds the Regional Board in refusing at this time to certify that the effect of the award would be compatible with the national stabilization program. Such a determination cannot be made until the company program under the award is set forth, preferably with the piece-rate changes which are contemplated.

(4) Reconciliation of the company program under the arbitration award with the national wage stabilization program is a complex matter. Therefore, NWLB will appoint a special representative to help effectuate the arbitration award.



### COOKING THEIR OWN

The task of serving hot meals to thousands of workers in Lockheed Aircraft's main Burbank (Calif.) plant and eight branches around Los Angeles is now a job for the workers. Management last week presented some \$500,000 worth of restaurant equipment to Lockheed Employees Club (BW—Jun. 5 '43, p83) which will use any profits for its morale-building



## Politico-Union War

Race, religion, nationality and politics all enter into the bitter fight between C.I.O. and independent leather workers.

No ordinary labor row has forced the War Dept. into seizing and operating 13 small leather processing plants in the predominantly Irish Salem-Peabody area of Massachusetts. The seizure was ordered by President Roosevelt as the last resort to halt an 18-day strike



program. Project's heart is the main plant cafeteria (below) which serve 24,000 meals daily under direction of Charles Birgy, French-trained chief of the commissary, and under supervision of Frank Arrico, club president (above, left). An additional 36,000 meals are cooked in the main plant to be served hot at 22 outside canteens. The cafeteria feeds management too, including Robert E. Gross, Lockheed president (above, right).

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## Labor • 89



*Available  
to all industry  
at cost*



16 mm.  
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## 6 TRAINING FILMS

### "Use and Care of Hand Tools"

Authoritatively prepared to help meet military instructional needs, results have been so satisfactory that we are now making these films available to industry and schools at cost, as a contribution to the war effort.

Now, for the first time, a complete series of motion pictures is offered for the instruction of mechanics in faster, better methods of using all-important hand tools. The series includes:

Film No. and Title	Running Time (Min.)
101 Wrenches	20
102 Pliers & Screwdrivers	17 1/2
103 Chisels	12
104 Hammers	11
105 Punches, Drifts & Bars	14
106 Hacksaws	18

Full details will be sent you, without obligation, upon request . . . Write to Training Film Dept., Plomb Tool Company, Box 3519 Terminal Annex, Los Angeles 54, California.

# PLOMB



moved into the area during the last few years and taken unskilled and semi-skilled jobs in the leather plants. The Irish workers, who are rooted in the area, are the craftsmen of the industry—trimmers, finishers, etc.—while the newcomers generally work in the vats.

The independent group began its campaign by seizing the headquarters and \$50,000 treasury of the C.I.O. union, promptly precipitating a still-unsettled court fight. Latest move of the independents has been to petition the American Federation of Labor for affiliation, dumping a touchy problem in the A.F.L.'s lap.

• **NWLB Is in on It**—Meanwhile, the War Dept. and the National War Labor Board are trying to untangle the mess under provisions of the President's order, stipulating (1) that the private managers be left in control to as great an extent possible, and (2) that the C.I.O. contracts be left in effect.

## Color Line Cited

FEPC orders railroads and unions to end discrimination against Negroes and gives the 30 days to comply.

Virtually staking its existence on outcome, the President's Fair Employment Practices Committee (FEPC) ordered 20 railroads and seven independent and A.F.L. rail unions to stop discriminating against Negroes with respect to job opportunities.

This may reopen to Negroes employment opportunities on many roads which have been denied to them by agreement between the carriers and individual rail unions.

• **Allowed 30 Days**—Main FEPC action was to rule that an agreement among

## They Won't Stay Hired

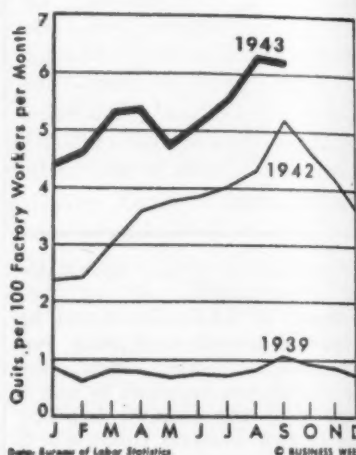
Industrial quits are the big, black flies in the current manpower stabilization ointment. In an effort to pluck them out, or at least to reduce their number, the Office of War Information last week released figures and facts compiled by the War Manpower Commission, the Bureau of Labor Statistics, and WPB's War Production Drive headquarters, which supervises activities of plant labor-management committees.

• **Only 3 Out of 17 Stay**—New and often seemingly trivial causes, plus the familiar deep-rooted ones, are making for high labor turnover rates. The 1939 level of less than 1% a month is taken as peacetime "normal." In August this year, turnover rose to 6.3%; it dropped only a fraction to 6.25% in September (chart).

War plants reckon that to increase their permanent force by three, 17 new workers must be hired. The quit rate is even higher for civilian manufacturing.

• **No Local Ailment**—The problem is nation-wide. A West Coast airplane plant, in a period of two months, hired 3,225 new workers, yet net employment decreased by 1,500. An East Coast war contractor had a labor force of 30,550 in March, 1943, but hiring of 4,850 workers increased his force by only 150.

Some of the turnover is justified, WMC officials say. About 75,000 skilled workers a month are being routed into acute labor shortage areas through intercity and inter-regional clearances. But most of the shifting is aimless and could be remedied by intelligent industrial and community planning. Of the eight workers per



Data: Bureau of Labor Statistics

© BUSINESS WEEK

hundred who were separated from manufacturing payrolls in September, six quit of their own volition. The other two are accounted for by layoffs, discharges, military calls, and deaths (BW—Oct. 2 '43, p92).

• **Million Women Needed**—Women and other so-called marginal workers cause a large part of the trouble. Eight women war workers leave their jobs for every ten hired. About 1,000,000 additional women workers will be needed this year, yet the turnover rate requires that several times that number be employed to insure the required final total.

Some 26 causes for quits have been found. Most of them result from the war. General reasons workers give for changing jobs, in addition to the time-honored ones of better wages or more suitable work, are dislike of crowded war area living conditions, lack of social outlets, poor transportation, and eating problems.

# PREWAR PRICES HERE

**W**E Americans are paying more today for most things we buy.

But there is one outstanding exception — railroad freight rates. They are the same or lower than they were before the war.

In fact, taken all together, freight is being moved at an average charge of less than a cent for moving a ton one mile. This is less than the railroads have received at any other time during the last quarter of a century.

Meanwhile, the cost of things railroads use has gone up. Materials are up—wages are up—taxes have rocketed.

Because railroads are carrying the heaviest load ever shouldered by

any transportation system, they are taking in more revenue than ever before.

But if you hear it said that railroads are piling up a lot of money, just bear in mind that railroad expenses and taxes, together, are running at record level, and that after it is all over there will be a tremendous need for rebuilding and restoring the service life now being "run out" of railroad plant and equipment as never before.

And remember, too, that the railroad freight station is one place where prices are still prewar.

**DECEMBER 10 "CLOSING DATE" FOR CHRISTMAS PACKAGES.** This year—when war traffic has first call on all shipping services—it is more important than ever to send your Christmas packages early.

Pack them adequately, wrap and tie them securely, address them right and get them started (to points in the United States and Canada) by December 10.



**BACK THE ATTACK  
WITH WAR BONDS**

**AMERICAN RAILROADS**

**ALL UNITED FOR VICTORY**



## The Needed **BREAK** in Your ROUTINE

Even the busiest war executive (and Mrs. Executive, too) should have an occasional break in the routine—ten days or more with the pressure off, in surroundings where nerves and mind can relax from strain and tension.

Visits to The Homestead accomplish this purpose because the charm and restfulness of this distinguished hotel are conducive to complete relaxation. The Homestead Spa is at its best during the winter months.

For booklets, rates, etc., address The Homestead, Hot Springs, Virginia, or our New York Office in the Waldorf-Astoria. The Homestead is just overnight by train from Eastern and Middle Western cities.

# The HOMESTEAD

VIRGINIA HOT SPRINGS

## ★★★★★ *Inventive Pioneering* in PEACE and WAR GRAY

✓ **An Opportunity For  
MANUFACTURERS  
and INVENTORS**

Have you an idea or invention in electro-mechanics which you think will aid the war effort, or which has peace-time application? We'll be glad to develop it with you on a mutually satisfactory basis.

We are planning to add 5 or 6 products to our post-war line. If you have a product or idea which you believe would fit in with our activities, write our President, Mr. W. E. Ditmars, in complete detail. We will consider any practical arrangement.



### THE GRAY MANUFACTURING COMPANY

Makers of telephone pay stations since 1891

HARTFORD, CONNECTICUT  
230 PARK AVE., NEW YORK

The telephone pay station you find so conveniently at hand, wherever you may be, was invented by William Gray. And ever since we started making it back in the '90s, we have taken a leading part in electro-mechanical progress. So when war came, we were ready.

With a fully equipped electrical laboratory and engineering department, as well as excellent manufacturing facilities, we were in a position to design and build large quantities of electronic equipment (including RADAR) and other electro-mechanical devices now being used by the armed forces on land, on the sea and in the air . . . We are also serving the war effort with fabricated metal parts of many kinds and with recording machines for radio and dictation.

When Victory is won, we will be in a better position than ever to serve industry in the electro-mechanical field and in Electronics. Our engineering department and electrical laboratory are at your disposal now for assistance in the development of your post-war products.

the ten railroads belonging to the Southern Railway System, the Brotherhood of Locomotive Firemen & Enginemen was in violation of the President's fair employment practice order and must be set aside within 30 days.

The agreement was designed to down the employment of Negroes firemen and to give white workers promotion priority over Negro employees.

• **Unions Criticized**—The committee also rapped railroad unions which had expelled Negroes from membership and ordered them to "cease and desist from . . . discriminatory practices affecting the employment of Negroes."

Involved in the southeastern agreement are the Atlantic Coast Line Railroad Co., Atlanta Joint Terminals, Central of Georgia Railway Co., Georgia Railroad, Jacksonville Terminal Co., Louisville & Nashville Railroad Co., Norfolk-Southern Railroad Co., Louis-San Francisco Railway Co., Seaboard Air Line Railroad Co., and Southern Railway Co.

• **Additional Orders**—"Cease and desist" orders also were issued against the Baltimore & Ohio Railroad, Baltimore & Ohio Chicago Terminal Co., Chesapeake & Ohio Railroad, Chicago Northwestern Railroad, Gulf-Mobile, Ohio, Illinois Central, Louisiana & Kansas, Missouri-Kansas-Texas, Norfolk & Western, and Union Pacific.

The Union Pacific agreed to comply while hearings were in progress. The Virginian Railway reached a settlement prior to hearings, permitting withdrawal of the complaint, and action against the New York Central and Pennsylvania railroads has been held up pending negotiation of a possible settlement of the issue.

• **Unions Named in Orders**—Unions cited by the committee included the Brotherhood of Locomotive Firemen & Enginemen, Brotherhood of Railway Trainmen, Order of Railway Conductors, Brotherhood of Railway Carmen, Brotherhood of Locomotive Engineers, International Assn. of Machinists (A.F.L.), and International Brotherhood of Boilermakers (A.F.L.).

### RADIO APPEAL FOR HANDS

War plant procurement agencies of the West Coast are watching the United States Maritime Commission use of radio to lure white-collar workers to shipyards in the San Francisco Bay area.

The commission has bought time of the Columbia Broadcasting System's San Francisco station KQW for a series of weekly half-hour programs emphasizing "that 98% of shipyard jobs do not require great physical exertion." Men and women from various professions now working in the shipyards will be brought before the microphone to tell



the Son  
Broth  
& Eng  
Preside  
order  
days.  
ed to  
egroes  
workers  
egro e

pleasant it is to work for Henry J. Ser, the Marinship Corp., or West-Pipe & Steel Co. Musical talent for the show will be from the shipyards with the winning contestant on each program receiving a \$25 war bond.

## CURITY CLAUSE REVOKED

The National War Labor Board has, for the first time, revoked a maintenance-of-membership clause because a strike occurred. Victim of the board's action is District 50 of the United Brotherhood of Carpenters and Joiners of America. Its union security contract with Commercial Solvents Co. of Chicago, Ill., was set aside because the company called a walkout nine days after a new agreement was signed. In punishing District 50, with labor members dissenting, NWLB kept alive an incentive for good conduct by deciding that the union could petition for reconsideration after six months.

## TEXAS TEST INDECISIVE

A showdown on Texas' antiunion law was sidetracked this week as a state court dismissed, on technical grounds, a complaint against R. J. Thomas, president of C.I.O.'s United Automobile Workers, for soliciting members without a registration card (BW—Nov. 6 '43, p98).

## OF M. LOOPHOLE CLOSED

Plugging a loophole in maintenance-of-membership rules which has worried unions, the National War Labor Board's Shipbuilding Commission, in ordering a new 15-day escape period for employees of Bethlehem Steel Shipbuilding Division, decreed that only members in good standing could resign their union membership.

Under maintenance-of-membership contracts, employees who do not leave the union during a 15-day escape period must remain members or lose their jobs. What has happened under m. of m. in a number of cases, however, is that members become delinquent in their dues payments and the union hesitates to demand their discharge. The War Production Board has heard reports of one A.F.L. local in a West Coast plane plant, for example, which has thousands of dues delinquents yet doesn't demand their dismissal because the plant has inadequate manpower, and public reaction to layoffs in the face of labor shortages and at union insistence might be stunning.

Before the Bethlehem decision, an employee who owed, say, six months' dues could escape the obligation to pay by taking advantage of the escape period when the contract was renewed. The Bethlehem ruling, calling dues payments an "equitable and reasonable" responsibility, changes that.



Speedi-Dri, even when soaked in oil, will not burst into flame. Unlike sawdust, Speedi-Dri is an effective fire-retardant. Blanket the oily floors around your machines with Speedi-Dri and you need never fear the dangers of a flash fire.

But Speedi-Dri does more than control the fire hazard. It provides a non-slip surface, helping to prevent many a falling-accident. Its absorption quality is so great that it will actually draw old oil stains from wood, concrete, or steel floors. It can be spread by hand and easily swept up with a broom. For all-round effectiveness in oil-absorbed and floor-covered, nothing can compare with Speedi-Dri.

When you figure the money you save on insurance, cleaning equipment, and labor; the production time you save by reducing accidents; the lift to employee morale that comes from a cleaner, safer shop, Speedi-Dri almost pays for itself!

You'll never believe what this product can do, till you see it with your own eyes. Write for a generous Free Sample. There is only one Speedi-Dri. (If you use water-soluble oils, or if water is also present, ask for Sol-Speedi-Dri.)



### SUPPLIERS

East  
REFINERS LUBRICATING CO.  
New York 1, N. Y.

Midwest and South  
WAVERLY PETROLEUM PRODUCTS CO.  
Philadelphia 6, Pa.

West Coast  
WAVERLY PETROLEUM PRODUCTS CO.  
Russ Building, San Francisco 4, Calif.

Prompt Service from Warehouse Stocks in Leading Cities

# MARKETING

## Costs Spotlighted

Food distribution expense, brought into sharp focus by FTC report, affords farmers a new weapon in subsidy fight.

Providing a rich storehouse of fuel to feed the Capitol Hill fires started by certain leaders of the congressional farm bloc who want to squeeze food processor and middleman margins rather than subsidize increased farm prices, the Federal Trade Commission's recent report on costs and methods of food distribution might become headline news when congressmen and senators have had time to digest its voluminous findings.

● **To Keep Busy**—Started by a commission resolution dated June 27, 1940, the investigation originally was designed to keep the FTC research staff busy and justify annual appropriations for economists. Intervention of the war, with rising food costs as the major problem in holding the cost of living, however, has anointed the report with an importance and significance far beyond that which the commission dared hope for when it passed the original resolution.

When the investigation was started, it was designed to cover costs and methods of distribution in a number of consumer goods fields, but the report issued by the commission covers only foods. Other sections are promised later, but it is apparent that the food section was released for its possible bearing on the battle over the cost of living.

● **One Full Copy Available**—The report is a 424-page typewritten document replete with tables, charts, statistics, and descriptions of the operation of ten segments of the food industry. Copies of the original report were sent to Vice-President Henry Wallace and Speaker Sam Rayburn. Only one copy is available for public inspection at the FTC offices in Washington.

The commission has printed a 17-page summary of its findings and is now distributing this to all those who request copies.

● **The Subsidy Stand**—In some Washington quarters, it is said that the figures presented in the report offer one explanation as to why food trade associations have been so violent in their opposition to subsidies. On the theory that their opposition to subsidies gives them a common cause with the farm bloc, it is argued, food men made an

abortive effort to create a giant farm-food industry lobby which might well have been designed for the purpose of concentrating attention on subsidies and drawing it away from the costs of distribution.

From the standpoint of the food industry, the report raises the danger that labor (except the terminal market unions which, according to FTC, contribute to the high cost of fresh fruit and vegetable distribution) may make a drive on the costs of food distribution—a subject which would give it a common cause with the farm bloc for the first time in several years.

● **Sugar, Meat Lowest**—According to FTC figures, cane sugar refiners and meat packers distribute their primary products more cheaply than any other segments of the food industry. Including transportation paid by manufacturers, cane refiners reported that it cost them

4.56¢ per dollar of net sales to tribute their goods in 1940, while packers did the job in 1939 at 6¢ per dollar of net sales.

The commission was so impressed with these relatively low distribution costs that it used cane sugar and meat as the basis for making comparisons with costs in other segments of the food field—notably the 34.66¢ per dollar spent by the biscuit and cereal industry and the 34.93¢ per dollar by the packaged cereal manufacturer both in 1939. These are outstanding the two groups which showed the highest distribution costs for processed food (table, page 96).

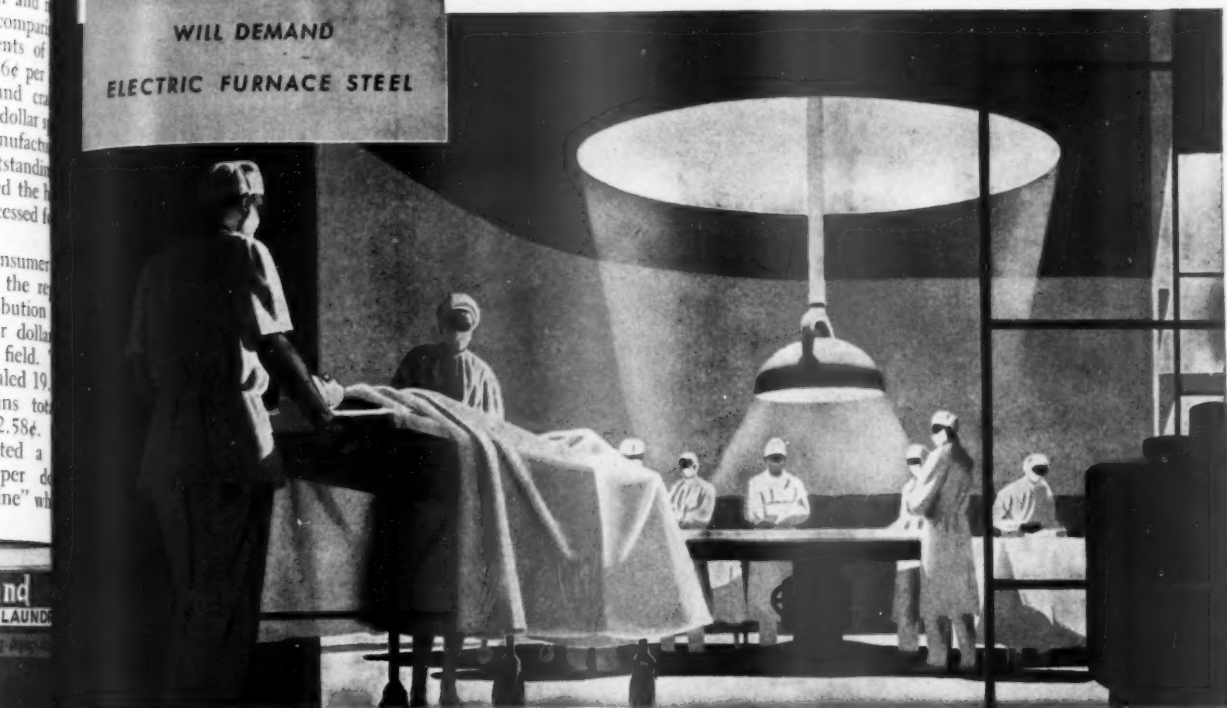
● **Co-op Contrast**—Retail consumer operatives got a plug from the report which showed their distribution expenses to be the lowest per dollar of net sales in the whole retail field. Co-ops' distribution costs totaled 19¢ per dollar, while the chains totaled 20.62¢ and independents 22.58¢. Operative wholesalers reported a distribution cost of 5.87¢ per dollar compared to 9.65¢ for "old line" wholesalers.

## CLEAN COMPETITION

Hard pressed laundry operators in crowded Portland, Ore., are getting a little relief as a result of another wartime innovation—a self-service laundry (right), where housewives take soap and soiled clothing to do their own washings on rented equipment. Hourly rates are 50¢ for the use of a washer, 60¢ for a gas-heated drier, 30¢ for a flatiron, and 60¢ for a mangle. Equipment of the laundry (below) includes stationary tubs, four washers, two mangles, and two driers which dry a load in about 30 minutes.



THE  
NEW WORLD OF TOMORROW  
WILL DEMAND  
ELECTRIC FURNACE STEEL



## A Better Chance to Live—Tomorrow

miracles are happening in medicine and surgery. They'll continue tomorrow, too when sulfa drugs, penicillin, blood plasma and advanced techniques work new wonders in saving lives—in lengthening life expectancy.

You'll have a better chance to live—partly, too, because of stainless steel. For this remarkable metal has helped make possible the high degree of sterility so essential in operating rooms. When diminished wartime demands again permit the use of stainless steel, you'll see more and more of it in every clinic and hospital.

INDURO Stainless Steel is one of the Republic Electric Furnace Steels which have proved their ability to make difficult tasks seem commonplace in war and in peace.

This metal of ten thousand uses stands apart from other materials, because it combines the strength of steel, the cleanliness of glass and the inertness of porcelain.

INDURO is the ideal material for hospital equipment; for kitchens, restau-

rants, food processing plants, dairies, pharmaceutical plants and other installations where absolute cleanliness is essential. It neither rusts nor corrodes in the presence of most acids and alkalis. It resists heat. It is surprisingly easy to clean. It does not cause metallic contamination or retain substances in surface pores. And it lasts indefinitely—because it is solid stainless steel all the way through with nothing to wear off. Other Republic Electric Furnace Steels include special steels, alloy steels and "aircraft quality" steels.

Through the rigid control possible only in the electric furnace, these steels are "targeted" to hit product and processing objectives exactly and consistently.

These are the steels which will help you meet competition tomorrow. They can increase product quality and enhance sales appeal. They can reduce costs through their compatibility to mass production methods. Republic Steel Corporation, General Offices—Cleveland 1, Ohio. Export Department: Chrysler Building, New York 17, N. Y.

### REPUBLIC ELECTRIC FURNACE STEELS alloy...stainless..."aircraft quality"

—for hardness, toughness, high strength to weight ratio  
—for resistance to severe tensional, torsional and compressional strains, to



shock and impact, fatigue, elevated and sub-zero temperatures, corrosion, oxidation, abrasion and process contamination.



# THE HEAVENS AND THE EARTH.



The Stars—always the wonder of the human race—have more than ever become a guide and a savior to man in this War, though they are largely eclipsed in our thoughts by the sciences of the Earth and the Air.

Celestial navigation—for centuries the guiding protection of mariners—is now guiding our Bombers and Air Transports over thousands of miles of trackless ocean and uncharted wilderness, day and night, with uncanny accuracy.

Thorough training in the science of the Heavens is as important to our long-range Air Navigators as their training in the use of compass, radio and instruments. Like the Pilots who fly them, these Navigators receive much of their air training behind reliable engines built by Jacobs.

**JACOBS** AIRCRAFT  
*Engines*  
POTTSTOWN • PENNSYLVANIA • U.S.A.

## MIDDLEMAN'S CUT

The wide variation in distribution costs for different types of products is clearly evident in the recent Federal Trade Commission study. Figures below are distribution costs expressed as cents per dollar of net sales.

	Distribution Cost	Period Covered by Survey
Cane sugar.....	4.56	1940
Meat .....	6.72	1939
Evaporated & condensed milk.....	7.13	1940
Butter .....	8.28	1940
Beet sugar.....	12.95	1940
Bakeries, chain store...	13.02	Sept., 1942
Canned fruits & vegetables.....	14.30	1939
Cheese .....	14.38	1940
Flour .....	19.00	1939
Retail fluid milk.....	22.08	1940
Bakeries, wholesale.....	22.41	Sept., 1942
Coffee .....	23.05	1939
Ice cream.....	24.23	1940
Biscuits & crackers.....	34.66	1939
Packaged cereals.....	34.93	1939
Bakeries, house-to-house .....	35.66	Sept., 1942

salers, who must pay salesmen's salaries and commissions.

● **An Oblique Thrust**—When FTC included an item in its budget for fiscal year 1941 to cover the cost of this investigation, leaders of the advertising industry made strong protests. Capitol Hill charging that the inquiry primarily was designed to bait advertising. The report contains no specific attack on advertising.

But buried in the analyses of the distribution costs in the baking, coffee, packaged cereal, and biscuit and cracker industries are figures that show the contribution which large advertising programs make to the expense of bringing these products to the consumer.

● **Sugar vs. Cereals**—Although meat sugar is sold under refiners' brand names, the commission points out that the advertising cost in sugar distribution is one-fifth of a cent per dollar of sales while the advertising cost of packaged cereals is eight cents per dollar.

Because of its bearing on enforcement of the Robinson-Patman law which is under the jurisdiction of the commission, the report discusses at length the granting of advertising allowances by manufacturers to retailers. However, this controversial subject is handled gingerly, and the report merely outlines both favorable and unfavorable comments made by those who furnish information to FTC.

● **Too Many Middlemen**—The most critical chapter in the report, which broadly speaking presents factual data

# OFFICE HEADACHES...

## Which ones are yours?

POOR DELIVERIES? FORGOTTEN PROMISES?  
TOO MANY ERRORS? OFFICE BOTTLENECKS?  
SWAMPED WITH ROUTINE? "JUNK HEAP" DESK?



**This new free  
Hammermill  
Book  
will help you!**

**Just Published for Executives  
Hard-pressed by Wartime Problems**

Whatever your problem, this little book, "3 Steps that Get Things Done," will help you. It's full of usable, tested ideas on how to simplify and speed up your office routine by putting more things on paper.

It suggests ways to plan and assign jobs, follow through, check results, clear your own desk for the essential jobs...with printed forms *that work*.

Why not check your system against the ideas in this handbook? You may find that better use of present forms or simple revisions or the additions of a few new ones will help you meet your increased wartime pressures.

Send for this book now. It's free.

LOOK FOR THE WATERMARK

IT IS HAMMERMILL'S WORD OF HONOR TO THE PUBLIC

### "KNOW HOW"

When you rely on paper to lighten your load, have your printer use Hammermill Bond. He knows that Hammermill papermakers, backed by 45 years' experience, have the "know how" to produce economically the paper which meets the test of business use.

# HAMMERMILL BOND

FOR VICTORY, BUY WAR BONDS

For free copy of the new little book, "3 STEPS THAT GET THINGS DONE," attach coupon to your company letterhead and mail to Hammermill Paper Company, Erie, Pa.

Name \_\_\_\_\_

Position \_\_\_\_\_

(Please attach to, or write on, your company letterhead)

BW 12-4

out pro or con comment, is de-  
to the distribution of fresh fruits  
vegetables. Here the commission  
there are too many middlemen.  
high distribution costs on fresh com-  
—estimated to be 57.4% on  
store sales and 51.8% on inde-  
store sales of fruit and 51.8%  
chains and 61.4% for independents  
ales of vegetables—are attributed to  
part played by transportation—plus  
ements among cooperating termi-  
receivers, commission men, and han-  
who control rail, water, and truck  
ing and marketing facilities."

**Relation to Price**—Hitting at  
costs, the summary of the report  
"Monopoly charges so fixed gen-  
are on a quantity basis and bear  
relationship to the selling prices of  
commodities affected. The effectiveness  
the enforcement of these schemes  
really depends upon the extent to  
with receivers and handlers and  
ons of their employees cooperate to  
ect their monopoly position."

**Concentration**—Reviewing  
which has been available previ-  
FTC pointed to the trend toward  
centration in the food processing  
by noting that: (1) Four compa-  
sold 77.05% of the nation's bis-  
and crackers in 1939; (2) of 70  
panies primarily engaged in process-  
cereals, 25 did three-fourths of the  
ness in 1939 and one of the 25 did  
of the whole total; (3) seven cane  
refiners sold 71.5% of the coun-  
supply in 1939 and five beet sugar  
panies handled 77% of the total  
me; (4) ten companies handled  
of the total 1939 value of pro-  
ed fruits and vegetables; (5) four  
esale meat packers handled 67%  
the 1939 value of products in this  
category; (6) four national baking or-  
ganizations handled 44.4% of the in-  
dustry's total sales in 1939; and (7)  
onal Dairies and Borden handled  
% of the combined total of manu-  
ured dairy products and retail fluid  
sales in 1939.

### W CONCERT SPONSOR

When the Boston Symphony Orches-  
is heard over the Blue Network on  
Christmas day under the sponsorship  
Allis-Chalmers Co., it will be the  
first time in six months that a big in-  
dustrial advertiser has inaugurated a  
daily symphonic program over a major  
work.

First on the symphony bandwagon  
the U. S. Rubber Co. which spon-  
sored the New York Philharmonic over  
Columbia Broadcasting System Sun-  
day. General Motors Symphony of the  
features the National Broadcasting  
orchestra also on Sundays.

The Boston Symphony will be heard  
Monday evenings (8:15 to 9:15 p.m.,  
E.T.)

Business Week • December 4, 1943

## Dependable Power for Blower Applications

### Oster Type C-2B Motor (1/100 H. P.) stands up in severe ambient temperatures . . .

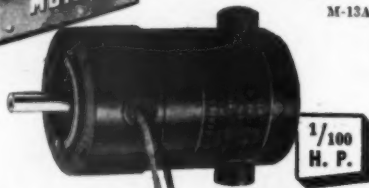
This specialized motor operates satisfactorily in a 90° ambient, for continuous duty. It is quality-built by the Oster organization, which for 15 years has been building fractional horsepower motors for use exclusively as original equipment on Oster motor-driven appliances. Ball-bearing equipped; built in an aluminum die-cast housing; 6, 12, 24, or 115 volts DC, 115 volts AC . . . You can depend on Oster motors to deliver creditable results.



Write for details.

John Oster Mfg. Co.  
Department B-13 Racine, Wis.

M-13A



## FIRE CHIEF

A patented Hooperwood  
"Engineered Canvas"  
permanently resistant to  
fire, water, weather,  
mildew and wear.

**WM. E. HOOPER  
& SONS CO.**

PHILADELPHIA  
New York • Chicago  
Millic: WOODBERRY,  
BALTIMORE, MD.

**HOOPERWOOD  
COTTON DUCK**

## Officers Liable

Supreme Court decides re-  
sponsible heads of corporations  
are accountable for companies'  
food-drug shipping violations.

The Supreme Court ruled last week that the government can prosecute responsible officials of corporations under the criminal provisions of the Food, Drug & Cosmetics Act even though they may have had no direct personal connection with the actual shipment of goods on which the prosecution is based.

• **Personally Responsible**—The court split five to four on the issue. Justice Felix Frankfurter, who wrote the majority opinion, indicated that responsible heads of food, drug, or cosmetic corporations should see to it that the products shipped by their organizations conform to the requirements of the law. If the law provided that the government could start criminal proceedings only against the corporation, his opinion held, the fines levied would become license fees for the shipment of illegal goods.

Joined by Justices Roberts, Reed, and Rutledge, Justice Murphy wrote a strong dissent. He contended that criminal liability always has been a very personal matter under the Anglo-Saxon theories of law, and therefore that the person committing a crime must have some direct connection with the criminal act itself.

• **Drug Man Convicted**—The case came to the Supreme Court on an appeal by the government from an adverse decision by the Second Circuit Court of Appeals at New York. A lower federal court jury had freed the Buffalo Pharmaceutical Co. of criminal charges growing out of the shipment of allegedly misbranded and adulterated drugs but convicted Joseph H. Dotterweich, its president and general manager.

Frankfurter established the rule that the Food & Drug Administration's failure to grant a private hearing to a person before recommending that the Justice Dept. proceed with criminal action is not a basis on which to reverse a conviction. Dotterweich had been present at the hearing granted his corporation but did not have a private hearing.

• **Act Requires Hearing**—Section 305 of the Food, Drug & Cosmetic Act provides that the administrator of the law "shall" give a hearing to the parties involved prior to the time that he recommends the institution of criminal prosecution to the Justice Dept.

Frankfurter did not explain the basis of the court's nullification of the language in section 305, except to refer to a 1911 decision also handed down by the Supreme Court on a similar provi-

sion in the old Food & Drug Act. In the 1911 decision, known as the *Morgan* case, the court held that the district attorney, as the chief law enforcement officer of the nation in his district, could start a prosecution for violation of any law, including the Food & Drug Act, with or without a recommendation from a Washington administrative agency.

Nevertheless, Food & Drug Administration officials have promised that they will grant hearings in virtually all cases before recommending criminal prosecutions.

## Milk Tax Set Back

Court finds Denver's levy  
unconstitutional; impost still  
being collected, but fate is con-  
tingent on appeals.

Denver's milk case has been complicated by a court reversal. The attempt to raise milk prices in defiance of OPA (through the medium of a 2-cent municipal tax to be handed back to milk producers as a price raise to prevent their striking) was set back when District Judge Joseph J. Walsh of Denver ruled the ordinance unconstitutional.

This conflicts with the recent opinion of U. S. District Judge J. Foster Symes (BW—Nov. 20'43, p. 74) who upheld the tax as legal under one of OPA's own regulations.

• **Called a Donation**—Judge Walsh said that to obtain continuity of a private business by a public donation in the guise of a tax "means we hold our lives and any material right essential to the enjoyment of living at the mere will of another," a condition he said the U. S. Supreme Court had characterized as "the essence of slavery." What has been done for the milk producers could be done for any business, he said; by its own terms, the ordinance serves a private instead of a public purpose and therefore unconstitutional.

Judge Symes' ruling will be appealed by OPA to the 10th Circuit Court of Appeals, while Judge Walsh's will be appealed by the city to the Colorado Supreme Court. That is, unless the controversy is settled at a Washington huddle called for this week between OPA officials, Colorado congressmen and milk producers.

• **Consumers Still Pay**—Meanwhile the tax is being collected and impounded as both sides wait for a higher court rule.

Milkmen had promptly applied to OPA after Judge Symes' ruling for ceiling price of 17¢ a qt.—as against present ceiling of 13¢ and a 15¢ premium supposedly provided by the city tax.



## Jewelry's Blight

Legitimate manufacturers, limited to half their gold needs, somnolently watch their business bleeding to the racketeer.

Black market operators are enjoying a brisk workout in the jewelry manufacturing business, much to the annoyance of legitimate manufacturers and dealers.

**History of a Swindle**—The trade journal, *Jeweler's Circular Keystone*, repeatedly warns readers against traffic with suppliers they don't know as a precaution against the racketeer. Recently the *Keystone* pointed up its warning with the case history of a retailer who, desperate for stocks, succumbed to the surreptitious offer of an illegal distributor. The jeweler learned unhappily with what manner of merchandise he had supplemented his dwindling stocks when a customer returned a ring which the retailer had sold in good faith as 14-carat gold. The customer exhibited a finger blackened at the place where the ring encircled it.

**Gold-Plated Silver**—The dealer cut the bank of the ring and found that it was covered with a thin electroplating of gold. The racketeer's deception lay not only in the 14-carat gold label engraved in the ring. His manufacturer, knowing it was a trade practice to assay a ring by the edge, also had attached a thin wire of 14-carat gold to each edge of the ring and thus got it past the dealer's inspection.

Legitimate jewelers, alarmed at the size of racketeer competition, fervently warn customers to look not only for the engraved definition of carat value, but also for the manufacturer's name and trademark. Both are required by law.

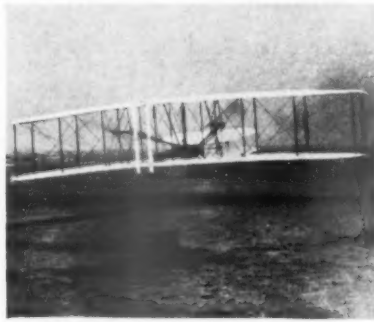
**Dealers Skeptical**—In another case recently referred to authorities for investigation, a firm circularized retailers offering gold wedding rings at \$1.75 a pennyweight, stipulating that only orders of \$100 or more would be considered.

Inasmuch as the average woman's gold ring weighs about one pennyweight, and the largest manufacturer of wedding rings in the country is doling out rings to his best customers in half-dozen lots, the trade was skeptical of the generous offer made by circular.

**Watch Importer Fined**—Only in one operation has anything been pinned on violators. The Office of Price Administration in August brought action against 28 Swiss watch importers. Subsequently one dealer was fined \$25,000 for charging a total of \$8,000 in excess of ceiling prices.

The others and an additional 23 dealers have been restrained from selling

## MAN'S INDISPENSABLE METAL...COPPER



FIRST AIRPLANE TO FLY  
Weight: 750 lb. with pilot

### Copper in Aviation

December 17 marks the 40th anniversary of the first heavier-than-air flight. On that historic date the Wright brothers' flimsy plane soared 120 feet through the air at Kitty Hawk, N. C.

Ever since then, copper and its alloys because of their unique properties have contributed to the development of aviation.

A single modern plane, such as the Flying Fortress, contains 3,000 lb. of copper. The speed, efficiency and safety of modern planes are dependent on this metal in literally hundreds of applications.

A number of the many copper alloys produced by The American Brass Company find special uses in the aircraft industry. Each is designed for specific purpose applications, and each performs its assigned task efficiently and dependably.



CURTISS ELECTRIC PROPELLER

### When the difference depends on a split second!

A few extra feet of altitude, a split second more or less—this may be the difference between life and death to American fighters in the sky.

It is because of this that the little known story of the modern airplane propeller becomes important to Ameri-

can aviation. For the propeller alone is an amazing and intricate machine, helping to make possible much of the efficiency of today's high performance airplane under the most extreme conditions of altitude, speed and power.

Few people realize, for instance, that the Curtiss Electric Propeller has a motor in the hub which automatically changes the angle of the blades as flying conditions change. Thus, at take-off, low blade pitch enables the propeller to screw through the air with maximum engine power, like a fine-thread screw. With increasing altitude, higher blade pitch gives the propeller a bigger bite in the air, permitting maximum speed in the rarer air encountered in high altitudes.

Few people realize, too, the extent to which this mechanical marvel depends on copper... for in each Curtiss Electric Propeller there are 163 brass parts, 35 copper parts and 81 bronze parts! These range from small screws to housings, shims, rods, studs and many other items.



COPPER RESEARCH TODAY  
... means better things tomorrow

### Copper looks ahead

America's war effort has developed new production techniques and materials at a fast pace. It means that in the postwar period we shall see many changes—changes that will make everyday living more enjoyable. More of the drudgery will be taken from housework; our homes will be more comfortable, with less maintenance work and expense.

All of the testing to find substitutes for vitally needed war materials has proved that copper is as essential today for many fundamental uses as it has always been—industry expects brass, bronze, nickel silver and other copper-base metals to play a basic part in the products being designed for postwar America.

4812

Published in the interest of a better informed war effort by

**THE AMERICAN BRASS COMPANY** 

General Offices: Waterbury 88, Connecticut • Subsidiary of Anaconda Copper Mining Company

# YOUR POST WAR PLANS INTEREST US NOW!



The ingenuity of our engineers has been featured in print repeatedly, most especially in connection with Spriesch-designed automatic bomb-release racks and shackles, and similar precision products.

The skill, competence and loyalty of our production organization are exceptional. So is the capacity of our plant.

These are war-enlarged assets which should be capitalized by American industry.

We still are fully engaged for Victory, but \*When The Shooting Stops we can swing overnight, back to industrial service.

If you are going to need our kind of co-operation, we should like to start thinking with you now about special machines, tools, dies, experimental work, and even about mass production of parts or complete assemblies.

*\*This is the title of an 8-page booklet which I shall find pleasure in sending to any industrial executive who will address me personally.*

Joseph J. Cheney, President

AD. No. 29



**Spriesch** Est. 1923  
TOOL & MANUFACTURING CO. INC.  
26 HOWARD STREET, BUFFALO 6, N. Y.

watches under permanent injunction, or until such time as they prove no violation of OPA prices.

Regulation of 200 importers of Swiss watches is, however, a relatively simple matter compared to an unestimated number of small costume jewelry manufacturers who are making five to six times as much profit as legitimate manufacturers receive on production under WPB order L-45, limiting them to 50% of the gold they used in 1941 (BW-Apr.24'43,p85).

• **WPB on Spot**—Legitimate producers, whose output has been cut in half by L-45, have the War Production Board on a spot. They claim that L-45, designed to divert manpower and facilities into war production rather than to conserve gold, merely penalizes legitimate operations.

And while WPB can't stop the black market, neither can it rescind L-45. Officials are afraid it would look bad to let such an obviously nonessential industry go back into full production even though it wouldn't interfere with war production to divert the small amounts of materials used in jewelry.

• **An Out for WPB**—Observers feel that with WPB on this spot, the only hope for legitimate manufacturers may be in relief from L-45 by way of individual appeals. Thus WPB might be able to save face without revoking or amending the order straight across the board.

Nearly all of the baser metals (copper, lead, iron, etc.) necessary to war production are, of course, more difficult to obtain than gold. One illicit operator is reported to have gone so far as to melt down copper pennies to make a base alloy for gold and silver plating.

• **No Labor Problem**—Manpower is relatively easy. Most jewelry craftsmen are not only too old for the draft, but also too old to be of much use in war work. At any rate they consider themselves too old to change their trade—especially those who are making more money out of the black market.

Laborers who work short hours for legitimate manufacturers under the curtailed production schedules are perhaps the biggest source of black market manpower. They put in overtime either for themselves or for some anonymous employer.

Also in this labor market are former employees of jewelry manufacturers now converted to war work, and a large number of war refugees, formerly in the European jewelry industry.

## WET STRATEGY BACKFIRES

The nation's liquor interests have a lot of new worries these days, but prohibition still looms as an outstanding bugaboo.

In Georgia, where 122 out of 159 counties are dry, liquor interests are worried lest wets shift into the dry ranks

because they are so disgusted with not being able to get liquor that they figure they might as well be officially dry.

This thinking was evident last month when Polk County voters called for a local option election. Liquor dealers in the county, which had been wet for two years, flooded the county with liquor to court the favor of their old customers.

They are glad they released it before the election because they cannot sell now. Polk County voted itself back into the dry column by an overwhelming majority.

## FOR DRY GOODS SURPLUSES

The nation's nonfood retailers have a plan for painless postwar disposal of government surpluses in their field. It came to light last week when Dr. David R. Craig, president of the American Retail Federation, presented recommendations of the Central Council of National Retail Associations to the Senate Postwar Planning Committee.

Like food retailers and wholesalers (BW-Nov.27'43,p86), dry goods interests are out to keep the big corporate chains from cornering government stockpiles.

Accordingly, the retailers recommend (1) that the government accept bids of quantities small enough to include the average retailer, and (2) that the period between opening and closing bids be at least 45 days—presumably to give small



## SELLERS' MARKET

In the interests of patriotism and postwar markets, the British firm of Rolls Razor, Inc., is buying back its product from the public (above) at \$5 each. The self-sharpening razors are reconditioned and sold to American troops through post exchange with which Rolls now deals exclusively. Some 250 razors were turned into New York headquarters the first week, and the sellers were given priorities on the purchase of Rolls Razors after the war.

with no time to form syndicates for  
 they figured out to avoid. Dr. Craig pointed to the  
 dry. As an example of what the retailers  
 st month. The Treasury Procurement Di-  
 led for a bid on last month in disposing of the  
 dealers in surplus textiles resulting from liquida-  
 wet from the National Youth Administra-  
 ty with. The call for a single bid on the  
 their old. which took several pages to list, and  
 it before. allowance of only 13 days between  
 not sell. opening and closing of bids raised com-  
 self back. plaints that the average retailer was ex-  
 overwhelmed. ded and syndicate action prevented.

## PLUSES MARKUP DILEMMA

Safeway Stores, Inc., has been trying  
 months to needle the Office of Price  
 disposal of. administration into definite action on  
 field. I. petitions (BW-Oct.23'43,p96) chal-  
 Dr. David. lenging the validity of various regula-  
 American Re. tions.

Last week, Safeway finally got the ac-  
 commend. cused. OPA formally refused to accept  
 National. the food chain's objection to classifica-  
 ate Post. tion of retail food stores according to  
 wholesaler. volume, as a basis for establishing maximum  
 ds inter. prices. However, the denial does clear  
 corporat. the way for carrying the case to the U.  
 erment. Emergency Court of Appeals.

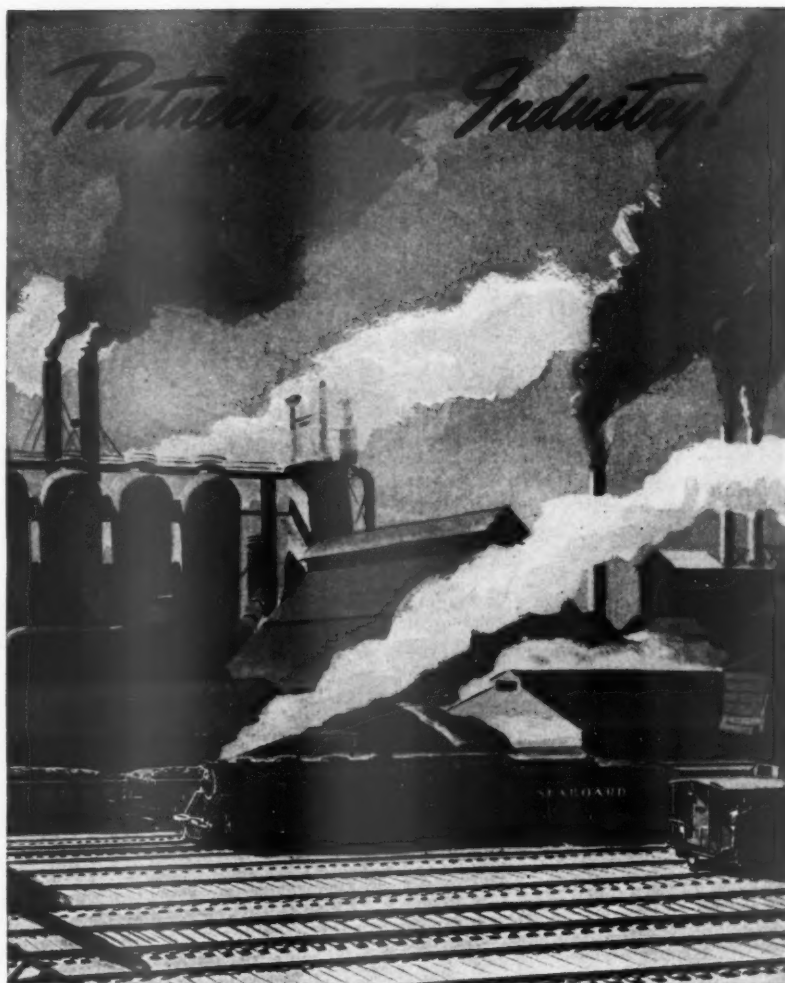
Safeway's protest against Maximum  
 omment. Price Regulation 422 points out that,  
 bids on. under the order, some of its 2,300 out-  
 lude the. lets are in Class 4 (largest volume, low-  
 e period. est markup), while most of them are in  
 ds be a. Class 3 (sales volume of less than \$250,-  
 ve sma. 00 annually, assigned a higher mark-  
 up). Since the chain's historic pricing  
 policy has been to maintain a single  
 ce structure for all outlets in a given  
 ding area, MPR 422 has forced the  
 ver Class 4 markup on Class 3 stores.  
 OPA argues that, since Safeway claims  
 meet the lowest price of competitors  
 a given marketing area, it should have  
 objection to selling at Class 4 mark-  
 up in all of its stores even though these  
 up are below ceiling for Class 3 out-  
 lets.

## HANGERS ARE HOARDED

Milwaukee dry cleaners and laundry  
 ners are convinced that there are  
 the hangers in the closets, but they  
 don't know how to lure them back into  
 circulation.

Recently the local Dry Cleaning Plant  
 owners Assn. played its trump card—  
 lost. Saturday morning matinees at  
 al theaters, to which children were  
 mitted for ten wire hangers each,  
 ed to bring in the hoped-for hangers.  
 orse, it apparently convinced house-  
 ves that their hangers were too valu-  
 able to give up.

Only 16,000 hangers came in, despite  
 promotion that included two weeks'  
 eliminary movie advertising, newspa-  
 display space, handbills, and the  
 al blessing of the district War Pro-  
 tection Board office. There won't be



The railroads of America are backing industry to the limit in the war of production. Only the close coordination born of a common cause could result in the extraordinary achievements of transportation and industry since the war began.

For many years the Seaboard Railway has recognized the interdependence of industry and transportation. On the established principle that the welfare of the railroad depends upon the prosperity of its patrons, the Seaboard has been working over a long period of time for the economic development of the territory it serves.

The Seaboard's interest extends beyond the location of new plants. It is equally concerned with the success of all industry served by its Line. Its policy is to provide adequate service and to adjust the freight rates on raw materials and finished products to enable these industries to compete with similar industries whether located in the South or elsewhere.

Remarkable progress has been made in the industrial development of the South in recent years. Present indications point to further expansion in the post-war period.

Seaboard will work in the future — as in the past — as Partners With Industry.

BACK THE ATTACK  
 WITH WAR BONDS

# SEABOARD

## RAILWAY

ONE OF AMERICA'S RAILROADS • ALL UNITED FOR VICTORY



any more such matinees. With clothes hangers currently valued at 14¢ each, the association figures it should have gleaned 100,000 to justify its expenditure of between \$1,200 and \$1,500 for renting twelve theatres and providing twelve full-length programs.

## Sperti Yields

**FTC prevails in attack on claims made for sun lamps. Food & Drug men keep wary eye on firm's biodyne advertising.**

In the preliminary round of what might develop into an all-out battle between Sperti, Inc., and government drug regulation agencies, the Federal Trade Commission has announced that Sperti Electric Co., Inc., and Science Laboratories, Inc., have entered into a stipulation abandoning a long list of therapeutic claims hitherto made for sun lamps.

Sperti, Inc., which has replaced Sperti Electric & Science Laboratories, is the commercial promotion organization which handles the inventions of Dr. George Sperti Sperti, 43-year-old scientist and inventor. Dr. Sperti is director of research and education for Institutum Divi Thomae, founded by the archbishop of Cincinnati, John Timothy McNicholas, as a graduate school of scientific research (BW-Sep.18'43,p20).

● **Irradiation Patents**—Prior to the creation of Institutum in 1935, Sperti was research professor and cofounder of the basic science research laboratory of the University of Cincinnati. During this time, he developed patents covering equipment for the selective irradiation of foods with vitamin D.

The FTC stipulation didn't question the ability of sun lamp models LC-77 and HI-41, apparently an extension of the food irradiation developments into the field of lamp therapy for humans, to generate vitamin D, but did take vigorous exception to the advertising claims made in respect to the human need for artificially inspired vitamin D.

● **Blurbs Banned**—General advertising claims which the stipulation bans include:

(1) That modern conditions deprive humans of most of the benefits of sunlight, forcing them to turn to radiation by artificial means.

(2) That the high death rate in winter as compared with the low death rate in summer is the result of ultraviolet light deficiencies in wintertime.

(3) That the ultraviolet radiation produced by the lamps is comparable to natural sunshine.

(4) That the lamps are indispensable for nursing or expectant mothers.

The stipulation also prohibits claiming that exposure to the lamps is the only way to obtain vitamin D or that

absorption of vitamin D radiation builds up general health. On the contrary, FTC contends, the only time an intake of artificial vitamin D has any therapeutic benefit is in cases where deficiencies of this vitamin exist—cases that generally cannot be diagnosed without a physician's assistance.

● **Must Post Warning**—Banning the claim that a lamp of the limited power of LC-77 is similar to the ones used by doctors in their offices, the stipulation goes an additional step to provide that the advertisements or the labeling for the product must warn that the lamp is not to be used by people suffering from pellagra, lupus, erythematous, or certain types of eczema.

Actually this stipulation is not very different from a score or more routine actions taken by FTC in the last two years against claims for similar lamps, but interest in the case results from the fact that the group promoting various Sperti products has been skirting for months very close to serious regulatory action on the part of the Food & Drug Administration, primarily in connection with the sale of "biodyne."

● **F. & D. Angered**—Sponsors claim "biodyne" is the skin respiratory factor capable of stimulating cell respiration and growth. Before distributing a biodyne ointment for use on burns, Sperti, Inc., filed the routine new drug application with the Food & Drug Administration.

In permitting the application to become effective, Food & Drug pointed out that this meant the government regarded the product as being safe for use but could not be construed in any man-

ner as approving the product or the therapeutic claims made for it. In fact, Food & Drug men are skeptical of the therapeutic claims made for the product and were angry when Sperti, Inc., referred to the fact in publicity and advertising that the new drug application had become effective.

● **Publicity Prohibited**—From the time the 1938 Food, Drug & Cosmetic Act went into operation, Food & Drug men have been strict in their effort to enforce section 301 (1) which prohibits the use in drug labeling or advertising of "any representation or suggestion that a new drug application has become effective on any product."

Actually, Food & Drug men contend that Sperti, Inc., has produced no adequate, controlled, scientific investigation to show that biodyne has any appreciable therapeutic benefits when used on burns. On the contrary, the Detroit doctors reporting in a recent issue of the Journal of the American Medical Assn. said that their work reveals no evidence that biodyne accelerates the healing process or has advantages over ordinary petrolatum ("vaseline") gauze for the treatment of burns.

● **Cosmetics Clash Seen**—Further trouble between Sperti and Food & Drug, and perhaps FTC, is expected when the organization promotes biodyne as an ingredient in a new line of cosmetics which Mary Pickford is reported ready to back with a name and money. Government regulatory men say they don't see how any valid representation can be made for the presence of this ingredient in cosmetics.

### ALLIS-CHALMERS- ROOM FOR MORE

PRODUCTION INDEX OCT. 15, 1943 — Shows percentage of capacity used by current production. Note the excess capacity available!

### MARINE NOW HAS ORDERS!

Industrial Machinery Production Curtailed: New Capacity Released to Marine Division

**ACT NOW!** The limited production of marine machinery during the war has created a shortage of equipment for the post-war period. Allis-Chalmers is now releasing its surplus capacity to the marine division. This means that you can now obtain the latest and best marine machinery at a greatly reduced cost. Don't miss this opportunity. Write today for a copy of our new marine machinery catalog.

**ALLIS-CHALMERS MARINE**

## WORK WANTED

Sign of the times is Allis-Chalmers' bid (above) for new marine orders, proof that the cutback in industrial machinery for new war plants (BW—Apr.10'43,p13) has made "excess ca-

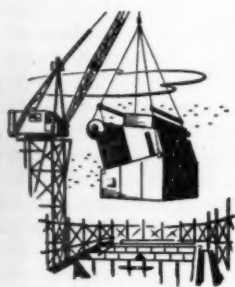
capacity available." The ad, to run for a month in shipbuilding magazines, reports that Allis-Chalmers is applying idle facilities to its marine division and will accept orders for immediate production but warns that the "favorable situation" may be only temporary.

# WHERE THE IMPOSSIBLE WAS ACCOMPLISHED!



## 24 Liberty Ships by one yard in one month

*...and 16 are powered by C-E boilers*



This scene-at-night shows the outfitting basin of the Kaiser shipyard in Portland — the Oregon Shipbuilding Corporation — where a miracle of production was recently achieved. Despite many predictions of "impossible", this shipyard succeeded in delivering to the Maritime Commission during a single month the record-breaking total of 24 Liberty Ships. This is better than 2 ships per way per month for this 11 way yard — an all-time production high. Sixteen of these 24 ships — two-thirds of them — are equipped with C-E Boilers.

The breaking of records by shipbuilders demands corresponding performance by the company supplying the boilers — the heart of a ship. Accelerated schedules notwithstanding, no ship has ever been delayed waiting for its C-E Boilers.

A-763A



C-E installations span the whole range of steam generating requirements from small stoker-fired boilers of less than 50 horsepower to the largest power station units.

## COMBUSTION ENGINEERING COMPANY, INC.

200 MADISON AVENUE, NEW YORK 16, N.Y.

# FINANCE

## Banks Add Capital

Improvement in the deposit ratio is among purposes to be served, but old 10 to 1 figure is no longer holy.

Radical changes in the composition of bank funds have caused marked revision in old unwritten safety codes of bank operation. Most notably, there is no longer much reverence exhibited toward the time-honored idea that each \$10 of deposits should be backed by \$1 of combined capital and surplus.

Deposits have risen to the moon; vast expansion of capital funds would have been necessary to keep pace. But, because a preponderance of banks' assets now are in cash and government bonds, even the safety firsters are pretty well agreed that the old 10 to 1 rule is passé.

• **Better Ratios Desired**—Even so, more and more banks are taking steps to bolster their ratios, though they aren't shooting directly at 10 to 1. One of the first straws in the wind was New York Trust Co.'s sale of \$7,500,000 in new stock (BW—Apr. 24 '43, p113), almost all of which was subscribed by the bank's stockholders. Currently there is quite a flurry of similar proposals.

Sixth largest bank in the 12th Federal Reserve District and Oregon's largest, the United States National of Portland has watched its deposits shoot up like those of other banks in defense areas—from \$196,000,000 at the time of Pearl Harbor to \$398,000,000. The institution proposes to increase capital from the present \$12,800,000 to \$16,000,000 by sale of 75,000 shares of its \$20 par stock.

• **Underwriting Arranged**—This stock would be offered first to stockholders at \$40 a share. Investment bankers, headed by Blyth & Co. and Merrill Lynch, Pierce, Fenner & Beane have agreed to purchase and reoffer any shares not so subscribed.

The Continental Illinois National Bank & Trust Co., Chicago's biggest and the nation's fifth largest bank, has seen its deposits climb 48% to \$2,386,000,000 since Pearl Harbor. It is asking its stockholders to approve an increase in its capital and surplus, but this will not involve the sale of any new shares. Transfers from undivided profits will raise capital and surplus, now \$50,000,000 each, to \$60,000,000 each. A 20% stock dividend will then be declared.

• **Contingent on Taxability**—Stockholders of Chicago's next largest, the First National, where deposits have risen

over 50% in two years to almost \$2,000,000,000, will vote soon on proposals to raise capital from \$30,000,000 to \$50,000,000 and to pay a 66⅔% stock dividend. However, this will not be done if such a stock dividend, under the new tax bill, should be declared to be taxable.

The American National Bank & Trust Co., a smaller Chicago bank, is asking its stockholders to authorize doubling of its capital stock, a 50% stock dividend, and sale of the rest of the new shares at par. This operation would increase its present capital and surplus (eliminating \$500,000 of preferred now held by the Reconstruction Finance Corp., which is to be retired shortly with funds already set aside) from \$3,500,000 to \$5,000,000.

## Popular Liquor

National Distillers makes offer for Allied Mills' whisky subsidiary; shares shoot up, but some holders don't approve.

Last September, Allied Mills, Inc., after rumors had been rampant for some weeks that something was in the wind in connection with its wholly owned whisky subsidiary, Century Distilling Co., finally announced negotiations looking towards the latter's sale.

• **Joins in Liquor Boom**—Allied Mills is one of the large factors in the livestock and poultry feed trade, but its shares promptly began to receive attention from the speculators Wall Street has dubbed barflies. The stock, then selling at around \$25, proved an active participant at times in the subsequent boom in the liquor group.

The negotiations in question took considerable time to complete. In fact, not until about a week ago was Allied finally able to announce that, subject to stockholder approval at a special meeting called for Dec. 8, it had agreed to sell Century Distilling to National Distillers Products for \$27,000,000.

• **Trading Volume Soars**—This news, however belated, caused trading on the Big Board to boil; in one week, transactions in Allied stock actually equaled over 20% of the total amount of Allied stock now outstanding. The price approached \$37.50, a level some \$9 above the previous week's low.

Actually, National Distillers would pay only some \$17,750,000 for all the outstanding Century shares. Allied would secure the remainder of its price via a dividend of around \$4,650,000

(the amount of Century's surplus as of Sept. 30) and the payment by Century of the \$4,600,000 it now owes its parent. Allied estimates that final net proceeds of the deal would be cut to about \$22,500,000 by the federal tax on the transaction.

• **Traders Aren't Too Happy**—Mill traders who had been expecting a windfall were set back by the news that the Allied directors very definitely had no intention of paying any special dividend out of the proceeds; if the deal goes through, however, they may "distribute" a larger portion of annual earnings as dividends than has been the policy in the past.

Actually, disposition of such funds had still to be decided upon, except that \$1,227,000 would be used to pay off long-term debt; \$5,000,000 to \$6,000,000 has been earmarked for use later to finance an expansion program of Allied livestock feed and soybean business interrupted by the war.

• **Officer Shies at Deal**—Such news, of course, dampened speculative interest. The market situation has been muddled, too, by word from Harry G. Atwood, vice-president of Century and son of Allied's founder, that he was soliciting proxy votes to oppose the plan since \$27,000,000 represents "not more than half of the true worth of Century—its whisky in storage" and the sale might be "liquidating additional millions of potential profits."

Atwood, who says his family owns over 5% of the Allied stock, claims, moreover, that the distillery and whisky in storage is daily increasing in value; that it represents a splendid inflation hedge, and that the subsidiary in the past has been contributing about one third of Allied's earnings. He asserts that Century's future holds bright possibilities and that its loss will be felt by stockholders since the distillery's free byproduct increases Allied's profits.

• **Brand Names a Problem**—On the other hand, the Allied management contends that Century, to keep its brands alive, would be forced to make monthly withdrawals of whisky from storage which would more than offset the rising value of that still left. Also that Century profits this year will be only 20% to 25% of the parent's consolidated net.

Furthermore, as Century earnings are in large part, subject to the 90% excess profits tax, the Allied management sees no likelihood of changing the subsidiary's present earnings trend. Century's free byproduct, in addition, has always been sold to the parent at the regular market price, says the management, and terms of the sale provide for the continuance of this source of supply on the same basis.

• **Other Proposals**—Nevertheless, another stockholder intends to ask that the plan be substituted for the deal under which the Century stock would be



# "YARDSTICKING" THE ACTUAL WORTH OF EACH JOB\*

● Job evaluation provides a sound, impartial appraisal of the monetary payment to which each job is entitled, based upon the responsibility, skill, effort and working conditions involved. Such an appraisal of each job in a manufacturing program per-

mits a correlation of wages on a true merit basis—more satisfactory to labor and management alike . . . May we make available to you a more thorough explanation of the advantages of job evaluation? Write:

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Representatives in principal industrial areas  
BUSINESS AND INDUSTRIAL MANAGEMENT CONSULTANTS

\* In cooperation with

## PLOCAR ENGINEERS

*This is under no circumstances to be construed as an offering of this Preferred Stock for sale, or as an offer to buy, or as a solicitation of an offer to buy, any of such Stock. The offer is made only by means of the Prospectus.*

NEW ISSUE

249,741 Shares

### THE DOW CHEMICAL COMPANY

Cumulative Preferred Stock, Series A  
(Without Par Value—\$4 Dividend)

Holders of the Company's Common Stock were given pro rata rights to subscribe to an aggregate of 249,741 shares of Cumulative Preferred Stock, Series A, under terms outlined in the Prospectus. Such rights expired at 3 P.M. Eastern War Time, November 22, 1943. This announcement relates only to such shares as have not been subscribed for through the exercise of the rights.

Price \$105 per share

*Copies of the Prospectus may be obtained from such of the several underwriters, including the undersigned, as may legally offer this Stock in compliance with the securities laws of the respective States.*

**SMITH, BARNEY & CO.**

November 24, 1943

to Allied stockholders on a share basis. In this way, he con-  
siders its parent would receive the  
amount of cash that National Dis-  
tillers would pay and at the same time  
its own stockholders first shot at  
melon.

Another group, said to hold 60,000  
shares, is also reported preparing to offer  
a bid for its whisky which will  
be that of National Distillers and  
leave Allied with the physical prop-  
erty. In fact, they consider Century's  
100-barrel inventory alone to be  
worth \$25,000,000.

**Market Is Cautious**—The stockholders  
meeting next week promises to be lively.  
The market, meanwhile, is taking no  
chances on the outcome; currently Al-  
lied shares have receded to around the  
level.

## Ambitious PUD

Hood River County (Ore.)  
public power group proposes  
own little TVA to encompass  
entire Pacific Northwest.

ough Congress some time back re-  
solved to consider a bill setting up a fed-  
eral Columbia River power project,  
which would have operated on a \$250,-  
000 revolving fund under a setup  
similar to that of the Tennessee Valley  
Authority, others in the area haven't  
admitted this to discourage them in  
going in the same way.

**to the Voters**—Voters of Hood  
River County, Ore., are scheduled to  
vote Jan. 7 on a proposal that would au-  
thorize the five directors of the ten-mile  
Hood River Public Utility Dis-  
trict to issue up to \$175,000,000 of rev-  
olving bonds to finance a public power  
project which almost duplicates the  
one of the one turned down by Con-  
gress.

His proposal was first brought to the  
attention of voters in the area by means  
of a full-page advertisement by the Hood  
River PUD in a weekly newspaper. The  
idea is to have the PUD buy up  
the utility systems on a wholesale  
basis and then dispose of them piece-  
meal to other Pacific Northwest public  
utility districts or municipalities able to  
take them to advantage.

**Financing Arranged**—Those behind  
the ambitious plan are reported confi-  
dent of its legality under the Oregon  
law, and they have already signed  
a contract with Guy C. Myers, a New  
York promoter, who has been active  
for some time in the state's PUD circles.  
If the plan succeeds, Myers has been  
authorized to represent the Hood River  
PUD in all subsequent purchase negoti-  
ations with private companies. He is to  
be compensated in relation to the size



**Group Insurance**  
is one sure way to build  
security for you and your  
employees.



LIFE • PENSION • SICKNESS  
ACCIDENT • HOSPITALIZATION

**AETNA LIFE**  
INSURANCE COMPANY  
Founded in 1850 Hartford, Connecticut

If You Use  
**WHEELS**  
or **AXLES**—  
You Need Our  
*Engineering Experience!*

We've helped industry "Keep 'em rolling" for over half a century, with millions of dependable steel wheels and axles for every use: tractors, trailers, road machinery, air compressors, agricultural implements, welders, etc. If you need any kind of wheels for your product,

Write for Illustrated Bulletin No. 350

**EWING WHEELS**  
ELECTRIC WHEEL CO., DEPT. BW, QUINCY, ILL.

**POST-WAR PLANS**  
**Ford, Bacon & Davis**  
Engineers

### UNCLE SAM'S WAR CHEST

calls for a **BILLION DOLLARS A MONTH** in War Bond sales. Do your part by encouraging your employees to set aside at least 10% of the gross payroll in War Bonds, through the Payroll Savings Plan!

## THE MARKETS

Due to the expectancy of momentous developments in the international picture, the varying implications of each fresh crop of rumors concerning the Roosevelt-Churchill-Stalin conference, the tax-selling factor, and the dislike of traders to carry any real positions over the long Thanksgiving week end because of the market's nervousness, stocks last week turned in a rather dismal performance.

• **New Lows for 4%**—On the Big Board, in fact, individual advances scored last week numbered but 254, against the 708 declines, and almost 4% of the issues traded actually registered new 1943 lows. Trading sessions in the fore part of this week, moreover, aside from the somewhat improved tone seen Wednesday, brought relatively little change in the earlier trends.

Consequently, about the only bright spot in the picture is the fact that an absence of buyers, rather than any real selling pressure, would seem responsible for the recent showing. Trading activity remained well under the 1,000,000-share mark. Also, the pace of the latest selling movement has been roughly one-third that seen during the Mussolini rollback of prices last July.

• **Early 1943 Gains Slashed**—Nevertheless, the market's recent chronic sagging has been taking its toll. Standard & Poor's industrial average, which early last summer showed a 27% gain in 1943, has since reached a level only some 9% above the year's low. The similar rail compilation shows considerable wear-and-tear, too, standing at a figure only 15% above its 1943 nadir whereas a 42% rise had been shown earlier.

The Street, generally, isn't such a cheerful place these days since few believe that the market can expect to wit-

ness the return of the early 1943 aggressive buying until something happens to justify investor and trader in abandoning at least part of the present caution. However, some do expect to see less than usual tax selling this year. Moreover, sales for tax purposes may end sooner than usual because Dec. 15 is the last day under which amended returns may be filed under the present pay-as-you-go plan.

• **London Is Steadier**—Like Wall Street, London has seen its market, for some weeks, lapsing into idleness and showing considerable hesitancy due to the similar "fears" of investors concerning the possible effects of an early peace on business generally. London activity has fallen to the lowest level in five months.

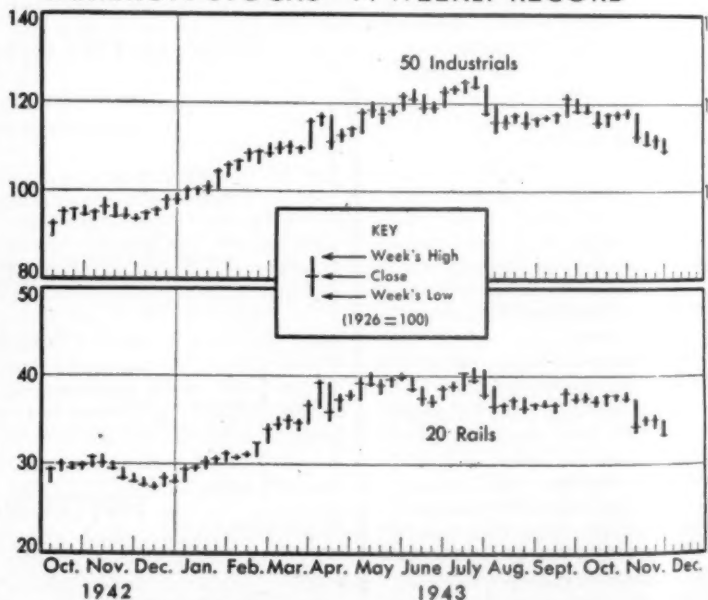
However, while the Britisher as much as his Yankee cousin is waiting for something big in the way of war news before making up his mind, he shows more disposition to heed official warnings about the dangers of too much optimism concerning the prospects of early peace. Consequently, brokers in London think prices will continue relatively steady over the near-term.

### Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
<b>Stocks</b>				
Industrial ...	109.1	111.8	117.8	93.1
Railroad ....	33.3	35.1	37.4	28.1
Utility .....	47.5	48.4	51.5	34.1
<b>Bonds</b>				
Industrial ...	119.2	119.1	118.7	114.1
Railroad ....	100.0	100.9	99.6	88.1
Utility .....	114.9	115.2	115.2	108.1
U. S. Govt. ...	112.2	112.3	112.8	109.1

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

### COMMON STOCKS—A WEEKLY RECORD



Date: Standard & Poor's Corp.

project may attain: 2½% commis-  
on the first \$4,000,000 of bonds  
ed by the PUD to finance such pur-  
ses; 1½% on the next \$10,000,000;  
1% on the remaining \$161,000,000.  
**Far-Reaching Program**—Since only  
private utilities (Pacific Power &  
and its affiliated Northwestern  
Electric) directly serve the area in ques-  
the Hood River PUD's private  
purchasing plans apparently are  
to be confined to its own district  
instead have been designed to cover  
each of the Bonneville-Grand Coulee  
over-pool area.

Utility interests are convinced that  
private power companies concerned  
lose no time in testing the new  
up in the courts if it is approved by  
voters. Nevertheless, the return of  
peace will certainly result in consider-  
able activity in the Northwest as the  
ous public power interests begin to  
arry around in an effort to offset the  
itable loss of war business in the  
Northwest. Hence the Hood River  
PUD's move may actually be an am-  
bitious attempt to jump the gun in the  
itable public power campaign.

## VT Loans Rise

Several large new credits  
reconversion are now being  
ranged despite the fact that  
ome lawyers doubt legality.

Law firms are disclosing an increasing  
ference of opinion concerning the le-  
gality, under existing law and Presiden-  
al orders, of commitments under VT  
ans (BW—Sep. 11 '43, p103) to finance  
the release of working capital after peace  
is arrived.

**New Statute Needed?**—Some law  
rms, in fact, are taking the position  
at postwar borrowing under such ex-  
ing credits will prove lawful only if at  
least some of the money is now used for  
productive purposes. Also, it is held  
at exclusively postwar loans require  
ore explicit authorization under a new  
et of Congress.

Be that as it may, the Federal Reserve  
ank reports that loans authorized in  
eptember under Regulation V virtually  
eached the \$300,000,000 mark and  
mprised the highest monthly total  
orded since last May. Also the many  
all loans reported these days have  
used bankers to revise upward their  
ea of the over-all potential volume of  
redits.

**Pullman Arranges Credit**—The Sep-  
ember total was swelled by the arrange-  
ents completed late that month by  
ullman, Inc., with a group of banks  
covering a \$60,000,000 VT loan for its  
bsidiary, Pullman-Standard Car Mfg.  
Reports indicated that a Sperry Corp.



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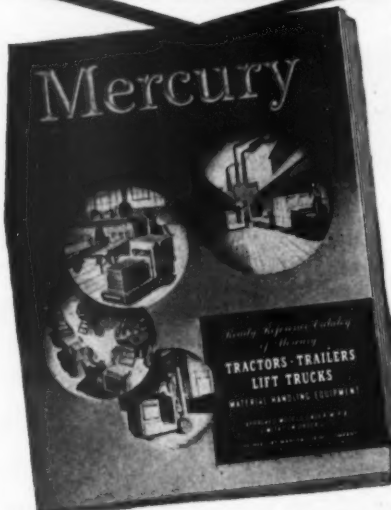
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\$125,000,000 VT loan is being actively considered, and that a similar \$150,000,000 credit is being discussed now by Western Electric with a banking group. Moreover, Chrysler Corp. early this month announced it had just completed arrangements with a number of banks for a new \$250,000,000 VT loan.

## A.G.E. Progresses

Associated Gas & Electric plan for reorganization seems close to SEC approval following tentative O.K. by staff.

Though the security holders and creditors are still keeping their fingers crossed, the tedious and much involved Associated Gas & Electric system bankruptcy proceedings at last show signs of having passed over the hump and may now be entering the home stretch.

● **Rapid Progress Possible**—Approval has been placed on the trustees' reorganization plans, with but minor modifications, by the Public Utilities Division of the Securities & Exchange Commission. Many interested parties now expect formal approval by the commission as soon as SEC has finished the public hearings. These are scheduled to start on Dec. 17. The proposals thus might be presented to the U. S. District Court in New York for final approval by early next year.

Under the trustees' proposals (BW—Jun. 19'43, p121), the Associated Gas & Electric Co. (AGECo.) and Associated Gas & Electric Corp. (AGECorp.) would be merged into a single corporation designed primarily as a liquidation vehicle through which geographical integration of the many operating properties could be carried forward under provision of the utility holding company law.

● **Proposed Capitalization**—This new company would have an authorized capitalization consisting of \$7,400,000 of ten-year 4½% debentures and 7,500,000 shares of \$5-par common shares, plus \$7,500,000 of senior debt which would be represented by a bank loan amortizable over a five-year period.

Sharing in the distribution of these new securities would be all the general creditors of both companies, including the holders of all but ten of the outstanding debenture issues, and also those holders of AGECo. preferred and preference stock who had received such shares previously in exchange for convertible debenture certificates.

● **Division of Securities**—Of the various securities involved, holders of the AGECorp. 8% debentures, due 1940, receive by far the most preferred treatment under the proposals. They receive all the new debentures on the basis of \$10.256 of the latter for each \$10 of the

old 8's, whereas other securities receive the new common in varying amounts based on the allocations determined by the compromise finally reached following the long-fought "recap" litigation concerning the priority of AGECorp. AGECo. creditors (BW—Nov. 1, p103).

All administration expenses, AGE trustee certificates, and federal, state, and local taxes would be paid off in full. ● **A Tax Problem**—However, the connection with taxes is not quite so simple as it sounds. Such disbursements provide only \$750,000 for the federal government in full settlement of 1934-39 taxes, and there is still a question as to whether the Treasury will be content with such an amount as payment in full since it claims both companies owe almost \$8,500,000 for period in question.

The SEC staff seemingly went along but grudgingly on the debt as it recommended that issuance called for in plan only because it was of relatively short character, had heavy serial maturities, and should be completely repaid prior to or at maturity. Moreover, permitting the issuance at once of new debentures, the staff recommended that authority to issue the senior in question be delayed pending the filing of more specific details defining terms and conditions.

● **Practical Considerations**—The staff pointed out that the new company would be essentially a liquidating vehicle and subject to the Section 11(B) proceedings heretofore directed to trustees of the A.G.E. system; also the new company would be able to carry out the rehabilitation program of one of the principal A.G.E. subsidiaries, the NY PA NJ Utilities Co., recommended by the A.G.E. trustees, which would involve considerable scaling down of debt, preferred stock, etc., of the important Metropolitan Edison and Jersey Power & Light operating properties.

## MORE GOVERNMENT BONDS

Domestic life insurance companies the first nine months of 1943 had \$1,770,000,000 available for investment of around \$1,770,000,000, according to the Institute of Life Insurance. On Sept. 30, 1943, their total investment holdings had a value in excess of \$33,100,000,000.

Over 78%, or some \$5,300,000,000 of all the money invested through September went into U. S. government issues. As a result, total holdings of such obligations rose about 30% in period, or by some \$2,840,000,000 to the \$12,230,000,000 level, representing close to 37% of all life company investments. Other major investments in the nine months included \$570,000,000 put into rail, utility, and industrial securities.

## COMMODITIES

### King Cotton Frets

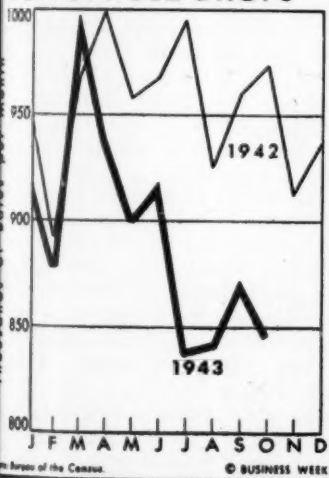
Uncertainty over postwar status knocks prices down \$10 a bale despite reduction in U. S. surplus since 1939.

The United States is going to emerge from this war in a much better position regarding the perennial cotton surplus than in 1939. Yet the price of cotton, prior to its midweek rally, had slid off \$10 a bale from the high recorded last April.

**Postwar Worries**—The sharpest decline came in November, representing quite clearly the peace fears that have affected many markets. The cotton trade, in short, is afraid the bottom will fall out of the market as it did in 1920 or a tumble from 43¢ a lb. to below 10¢ in the space of a few months.

There are, however, elements in the situation that encourage friends of King Cotton to believe his fate will be less gloomy after this war. In the months immediately following the war, with much of Europe's spinning and weaving capacity presumably obliterated, mills in the United States will be called upon to supply relief clothing. Even after the relief period, there is every reason

### COTTON USE DROPS



consumption of cotton by U. S. mills has dropped sharply from 1942's all-time peak; yet it continues far above the peacetime year—and probably will continue very high for many months to come. The shortage of manpower, rather than any lack of demand for cotton goods themselves, is the major factor in the downtrend.



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to expect that nationals of the liberated countries will buy clothing from England and the United States with whatever purchasing power remains after satisfying other minimum needs.

● **Foreign Pressure**—It is true, nevertheless, that there will be supplies of foreign cotton pressing for sale. The supply of staple grown outside the United States has been piling up.

At the start of the 1939 picking season, the United States had in storage a record carryover of 14,100,000 bales of old cotton; at the beginning of the 1944 season (Aug. 1), this will have been cut to between 10,500,000 and 11,000,000 bales. On the other hand, foreign cotton carryover on Aug. 1, 1939, was 7,500,000 bales, and at the start of the 1944 season, it will be well over 13,000,000 bales.

● **Efforts at Curtailment**—This rise in stocks of foreign-grown cotton has come about despite curtailment of acreage, notably in Egypt where land was switched to crops such as wheat whenever possible in the effort to provide bread for nations in the Near East (page 47).

Due to this accumulation of foreign supply, it obviously will be difficult for the United States to resume the fight for its once-rich export market. In addition, a Congress eager to protect farm prices has imposed legislation that will almost certainly price government-held cotton out of the world market.

● **Tied to 90% of Parity**—The congressional handicap is embodied in the requirement that the Commodity Credit Corp. must not sell, until two years after the war, at less than 90% of parity. The parity price at mid-November, announced on Tuesday of this week, was 20.71¢ a lb. That is nearly a cent above the present market (90% of parity would be 1¢ below), and it will decline (owing to the nature of the parity formula) only as rapidly as do the prices of the things the farmer buys.

Thus, even though the United States has pared its surplus during the war, a carryover of more than 10,000,000 bales is a lot of cotton. (Best peacetime year saw domestic consumption of only a little more than 7,000,000 bales.)

Peak wartime production (calendar year 1942) was a little over 11,300,000 bales, and domestic mills have fallen sharply from that top (chart, page 109). Thus the 1943 harvest of 11,442,000 bales is more than adequate for home needs.

● **Problem of Grade**—The only shortage—perhaps more correctly described as a relative scarcity—is in staple length above  $\frac{3}{8}$  in. The 1943 harvest averaged shorter staple than was desirable, so the effort next year will be to encourage more planting of the types that will produce longer fibers. (Acreage goal will be slightly under the 22,500,000 acres set for the 1943 crop.)



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